Carolyn Huynh Senior Scientist



Education and Credentials

M.S., Environmental Science, State University of New York College of Environmental Science and Forestry, Syracuse, New York, 2014

B.A., Biology, Seattle University, Seattle, Washington, 2012

Continuing Education and Training

Hazardous Waste Operations and Emergency Response 40-Hour Certification (2013; with annual refreshers)

First Aid and CPR Certified (2017)

Professional Profile

Ms. Carolyn Huynh is a scientist with 6 years of experience providing litigation and technical analysis support for environmental remediation and site investigations, data interpretation, and support for human health and ecological risk assessments for a variety of chemicals of concern. Ms. Huynh has extensive experience conducting environmental sampling, including collecting sediment, soil, groundwater, surface water, and biota samples, and conducting vegetation and nesting bird surveys. In addition, Ms. Huynh provides support for the review of state and federal laws, rules, and regulations to evaluate applicable environmental policies for NEPA- and California Environmental Quality Act (CEQA)-related projects. She is proficient in performing air modeling to support impact analyses under CEQA and managing cultural/tribal resource assessments.

Relevant Experience

Planning and Permitting

CEQA and Permitting for Various Sewer Rehabilitation Projects, Marin County, California – Provided CEQA, permitting, and biological support for Ross Valley Sanitary District on several infrastructure projects in Marin County. Developed Initial Study/Mitigated Negative Declarations (IS/MNDs), CEQA addenda, and Categorical Exemption/Notice of Exemption documents for various sewer rehabilitation projects. Specific areas of environmental analysis include conducting the air quality and greenhouse gas emission studies (utilizing RoadMod) and biological resource studies. Assisted with and coordinated tribal consultation and monitoring under AB52, and conducted biological surveys for nesting birds under the Migratory Bird Treaty Act, as well as vegetation monitoring for restoration areas.

CEQA for Piers 39-45 Remediation Project, San Francisco, California—Developed an IS/MND for CEQA review for remediation of PAH-contaminated sediments in the intertidal and

remediation of PAH-contaminated sediments in the intertidal and subtidal areas near Pier 39-45 in San Francisco Bay. Specific areas of environmental analysis and review include conducting the air quality and greenhouse gas emission studies (utilizing CalEEMod and California Air Quality Resource Board Harbor Emission Factors)

415.787.6306 chuynh@integral-corp.com



and transportation studies, and reviewing the biological resource assessment for incorporation into the CEQA document.

CEQA for Remediation Project in San Francisco, California—Conducted a pre-CEQA screening level assessment for marina facilities with a remediation component in San Francisco Bay. The preliminary screening level evaluation was conducted for air quality and greenhouse gas emissions to inform decision-making for project design and implementation.

Environmental Impact Statement/Report (EIS/EIR) for the Yolo Bypass Salmonid Habitat Restoration and Fish Passage, Sacramento, California—Developed a joint EIS/EIR for a project that was developed to improve fish passage and increase floodplain fisheries rearing habitat in the Yolo Bypass and lower Sacramento Basin. The lead agencies were the U.S. Bureau of Reclamation and the California Department of Water Resources. NEPA/CEQA regulations were interpreted for state and federal laws, rules, and regulations to evaluate applicable environmental and planning issues for the Population and Housing and Visual Resources sections.

EIS/EIR for the B.F. Sisk Dam, Safety of Dams Modification Project, Los Banos and Gilroy, California—Developed a joint EIS/EIR for the B.F. Sisk Dam Safety project to address dam stability and safety concerns. The lead agencies (U.S. Bureau of Reclamation and California Department of Water Resources) were concerned with several sections of the B.F. Sisk Dam and select foundation materials upon which the dam was built in the event of seismic activity. NEPA/CEQA regulations were interpreted for state and federal laws, rules, and regulations to evaluate applicable environmental and planning issues for the Indian Trust Assets, Environmental Justice, and Public Utilities sections.

EIS/EIR for the Long-Term Recapture and Recirculation of Restoration Flows, San Joaquin Valley, *California*—Developed a joint EIS/EIR for the Long-Term Recapture and Recirculation of Restoration Flows project, a project managed under the San Joaquin River Restoration Project, which proposes the development and implementation of a long-term plan for recirculation, recapture, reuse, exchange, or transfer of restoration flows.

Regional Habitat Guidance, Washington and Oregon—Assisted in the update of the Community Rating System for Habitat Protection Document and the National Floodplain Insurance Program (NFIP) Habitat Assessment Guidebook. These regional documents strive to assist communities in meeting the requirements and criteria of the Endangered Species Act in regard to the NFIP. Reviewed the Washington and Oregon biological opinions and ordinances to incorporate policy changes and to make these documents applicable for communities in both states.

Risk Assessment

Pesticide Use Profiles, Tule Lake and Lower Klamath National Wildlife Refuges, California— Participating in multiyear project with federal agencies in developing pesticide use profiles for several active ingredients, including toxicological assessments and fate and transport analysis to determine potential effects of pesticide use on wildlife resources.



Tank Farm Facility, Cut Bank, Montana—Evaluated risk to human health and ecological receptors from exposure to impacted soil, groundwater, surface water and sediment from refinery related activities. Evaluated multiple current and future scenarios following Montana guidance.

Risk Assessment for a Former Wood Treatment Facility, Mississippi—Assisted in the human health and ecological risk assessment to support site investigation under RCRA. Work included developing exposure parameters, compiling and reviewing toxicity criteria, and calculating wildlife receptor risk. Constituents of concern were PAHs and dioxins/furans.

Radiological Risk Assessment for a Former Uranium Mine, Arizona—Assisted in the ecological risk assessment to support the assessment of former uranium mining areas in Cameron, Arizona. Radium and non-radiological metals were evaluated. Determined exposure point concentrations, evaluated bioaccumulation, and determined wildlife risk exposure using statistical software R.

Groundwater Contamination Site, Cabo Rojo, Puerto Rico—Provided human health and ecological risk assessment for groundwater at a Cabo Rojo site consisting of several potential source areas with two identified groundwater plumes. Contaminants of potential concern included tetrachloroethene, trichloroethene, cis-1,2-dichloroethene, vinyl chloride, 1,1-dichloroethene, and 1,4-dioxane in groundwater, sediment, surface water, and soil.

Mansfield Trail Dump, Byram, New Jersey—Provided human health and ecological risk assessment for a site consisting of former waste disposal trenches located on wooded, undeveloped properties, and associated groundwater contamination extending into an adjacent residential neighborhood. Analyzed historical and current data from soil, groundwater, sediment, and surface water. Contaminants of potential concern included VOCs, SVOCs, PCBs, PAHs, and metals.

Construction Debris Landfill, Wallops Island, Virginia—Assisted with the development of an addendum to an existing screening-level ecological risk assessment (SLERA) to determine if there were greater risks to ecological receptors due to additional potential contaminants of concern or higher concentrations of existing contaminants of concern. Reviewed existing SLERA data and additional sediment and surface water data, created the conceptual site model, and researched sediment screening levels for dioxin/furan congeners.

Environmental Assessment and Site Investigation

Environmental Due Diligence, Multiple Sites in California—Conducting third-party reviews for multiple development sites in California. Responsibilities include performing reviews and advising clients whether or not current environmental documentation is sufficient, whether chemicals pose potential threats, and whether the scope of service provided by other parties is sufficient to meet site needs in the context of relevant regulations.

Phase I and II Assessments at Multiple Abandoned and Redevelopment Sites, New York, New Jersey, and Pennsylvania—Managed and led Phase I and Phase II environmental site assessment projects. Researched 130 years of data from various records and reports, including GeoTracker and Environmental Database Review to develop thorough analyses of environmental



impacts to client properties. Documented findings in well organized and comprehensive Phase I and Phase II environmental assessment reports to further assess recognized environmental conditions, and guided clients in evaluating next steps for purchasing, selling, or financing properties in New York, New Jersey, and Pennsylvania.

Analytical Laboratory Services Coordinator, New York—Proficient in aspects of the EPA Region 2 Contract Laboratory Program and Scribe software application required by EPA for sample chain-ofcustody reporting. Coordinated with laboratories to facilitate procurement of analytical services, responded to inquiries from laboratories and resolved sampling and analytical issues, and maintained and tracked sampling and analytical requirements.

Allocation Support, Steel Mill, Portland Oregon—Provide allocation support for multiparty cleanup and insurance cost recovery efforts.

Strategic Buyout and Relocation Services Program, Minot, North Dakota—Assisted with preparing broad and site-specific environmental assessments for residential properties under the Community Development Block Grant, National Disaster Resilience fund. The program aimed to relocate residents out of low-lying areas, vulnerable to flooding so that the city could implement flood control measures, including a flood levee system.

Publications

DeLeo, P., C. Huynh, M. Pattanayek, K. Clark Schmid, and N. Pechacek. 2020. Assessment of ecological hazards and environmental fate of disinfectant quaternary ammonium compounds. *Ecotox. Environ. Safe.* doi.org/10.1016/j.ecoenv.2020.111116

Hall, C., F. Knickmeyer, A. Wiegman, A. Brainard, C. Huynh, and J. Mead. 2018. A class exercise for Systems Ecology: Synthesis of stream energetics and testing Allen's paradox. *Ecological Modeling* 369:42-65.

Huynh, C.K., S.R. Poquette, W.L. Whitlow. 2014. Pyrethroid pesticide effects of aquatic invertebrate behavioral responses to danger cues. *Environ. Sci. Pollut. Res.* 21:5211-5216.

Presentations/Posters

DeLeo, P., M. Pattanayek, Y. Atalay, C. Huynh, and N. Pechacek. 2020. Assessment of ecological hazards and environmental fate of disinfectant quaternary ammonium surfactants. SETAC SciCon, SETAC Europe 30th Annual Meeting (Online). May 3–7.

