Mieko Mahi

**Region 10 Lower Colorado-Lavaca Regional Flood Planning Group
Member Nomination Form**

Nomination for member representing water districts

Date: 7/12/22

Nominee Name: Mieko Mahi

Nominee Phone: ██████████   Nominee Email: ██████████████

Nominee Mailing Address: █████████████████████████████

County in which the nominee resides: ████████████

Nominee Occupation: Freelance Industrial Photographer and President, Hallet Oak Foundation

Brief bio and summary of qualifications of the nominee:

As a sole proprietor since 1994, Mieko Mahi has long been an independent professional photographer in oil and gas business. As a co-founder, executive director, and a fundraiser for the Hallet Oak Foundation, Mieko has worked with Hallettsville Downtown Revitalization since 2016, and with the Friends of Lavaca River group since 2019. In 2019, the South Central Texas Art League awarded Mieko a plaque recognizing her steadfast commitment to the arts and to community beautification in Lavaca County. ██████████████████████████
██
████████

General type of flood-related knowledge, experience, and approximate number of years being involved in flood-related issues:

Mieko Mahi's keen eye for marketing and communication has enabled her to gain a considerable body of pertinent information to share with her community on aspects of flooding and wildlife conservation. She has contacted over 700 individuals about the Lavaca County flooding areas in 2019 and the flood control measures of the Lavaca River. While creating the county's first ever flood planning booklets which listed 50 water conservation and control resources, she also created the first ever historic Lavaca River timelime for Lavaca County.

OPTIONAL: Please list any additional attachments (resume, CV, etc.):

In making Hallettsville her home, she has demonstrated a concern commitment toward improvements the county's flood planning and the well-being of rural communities.

Name and Email of person submitting this form (Nominator may be the same as nominee):

Mieko Mahi, ████████████████████████

Nominations due by 5:00 PM, Friday, July 29, 2022
Submit nominations by email to the Region 10 Lower Colorado-Lavaca RFPG
Executive Committee at lowercoloradolavacaflood@lcra.org

Visit www.lowercoloradolavacaflood.org for more information.

**Region 10 Lower Colorado-Lavaca Regional Flood Planning Group
Member Nomination Form**

Nomination for member representing water districts

Date: 7/12/22

Nominee Name: Mieko Mahi

Nominee Phone: ███████   Nominee Email: ████████████████

Nominee Mailing Address: ████████████████████

County in which the nominee resides: ██████

Nominee Occupation: Photographer

Brief bio and summary of qualifications of the nominee:

Award winning photographer for oil and gas companies, founder of Hallet Oak Foundation, founder and Director of Hallet Oak Gallery, founder of Friends of Downtown Revitalization and Friends of the River in Hallettsville.

General type of flood-related knowledge, experience, and approximate number of years being involved in flood-related issues:

Has spent the last few years studying herbicide spraying along the Lavaca River in Hallettsville and studying alternatives to spraying as well as ways to promote a healthy river.
Has been proactive in attending Flood Control Board meetings, City Council Meetings and other events to advocate for the river in Hallettsville.
Would be a passionate board member who would take her position seriously.

OPTIONAL: Please list any additional attachments (resume, CV, etc.):

Name and Email of person submitting this form (Nominator may be the same as nominee):

Lois Weiss ████████████████

Nominations due by 5:00 PM, Friday, July 29, 2022
Submit nominations by email to the Region 10 Lower Colorado-Lavaca RFPG
Executive Committee at lowercoloradolavacaflood@lcra.org

Visit www.lowercoloradolavacaflood.org for more information.

Sanjay Negi

Nomination for member representing water districts

Date: 6/24/20

Nominee Name: Sanjay Singh Negi

Nominee Phone: ▮▮▮▮▮▮▮   Nominee Email: ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮

Nominee Mailing Address: ▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮▮

County in which the nominee resides: ▮▮▮▮

Nominee Occupation: Water Resources Engineer

Brief bio and summary of qualifications of the nominee:

Mr. Sanjay Singh Negi is a water resources/civil engineer with 4 years of experience in water resource projects with an emphasis in supporting drainage and stormwater management projects including modeling, permitting and design. He has a strong working knowledge in using ArcGIS to assist in project development and preparing informative exhibits. His experience includes working with a variety of governmental entities including the Federal Emergency Management Agency (FEMA), Harris County Flood Control District (HCFCD), Texas Department of Transportation (TxDOT), and Texas Water Development Board (TWDB). Sanjay has prepared technical reports, memorandums, and assisted project managers in administering and assessing drainage studies.

General type of flood-related knowledge, experience, and approximate number of years being involved in flood-related issues:

Sanjay is a CFM with 4 years of flood modeling and drainage experience. He has been responsible for conducting hydrologic and hydraulic analyses by using models like HEC-HMS, HEC-RAS, and XPSWMM. Sanjay has developed and calibrated hydrologic and hydraulic models for FEMA flood risk map updates and validation studies. Sanjay has been responsible for designing and analyzing storm drainage systems, conducting field visits to perform site reconnaissance and to obtain river water samples for monitoring/screening activities.

OPTIONAL: Please list any additional attachments (resume, CV, etc.):

CV Attached with email

Name and Email of person submitting this form (Nominator may be the same as nominee):

Sanjay Singh Negi, PE, PMP, CFM ▮▮▮▮▮▮▮▮▮▮▮▮▮

Nominations due by 5:00 PM, Friday, July 29, 2022
Submit nominations by email to the Region 10 Lower Colorado-Lavaca RFPG
Executive Committee at lowercoloradolavacaflood@lcra.org

Visit www.lowercoloradolavacaflood.org for more information.

Sanjay Singh Negi, PE, PMP, CFM
Water Resources Engineer

wood.

Years of Experience

4

Education

- MEng, Civil Engineering, Texas A&M University
- BTech, Civil Engineering, GB Pant University

Professional Registrations

- Professional Engineer: TX #▮▮▮▮▮▮▮
- Project Management Professional: #▮▮▮▮▮▮▮
- Certified Floodplain Manager: #▮▮▮▮▮▮

Professional Affiliations

- Texas Floodplain Management Association
- American Society of Civil Engineers

Software

ArcMap and ArcGIS Pro

HEC-2 through HEC-RAS 6.2 (1D/2D)

HEC-HMS 2.1 through 4.3

Bentley PowerGEOPAK

XPSWMM, EPASWMM

AutoCAD Civil3D

Python, R, C++, HTML

Honors and awards

Texas Public Education Grant, and Foundation for Excellence Scholarship

Professional Summary

Mr. Sanjay Singh Negi is a water resources/civil engineer with 4 years of experience in water resource projects with an emphasis in supporting drainage and stormwater management projects including modeling, permitting and design. He has been responsible for conducting hydrologic and hydraulic analyses by using models like HEC-HMS, HEC-RAS, and XPSWMM. Sanjay has developed and calibrated hydrologic and hydraulic models for large watersheds, for FEMA flood risk map updates and validation studies. Sanjay has prepared technical reports, memorandums, and assisted project managers in administering and assessing drainage studies. Sanjay has been responsible for designing and analyzing storm drainage systems, conducting field visits to perform site reconnaissance and to obtain river water samples for monitoring/screening activities. He has a strong working knowledge in using ArcGIS to assist in project development and preparing informative exhibits. His experience includes working with a variety of governmental entities including the Federal Emergency Management Agency (FEMA), Harris County Flood Control District (HCFCD), Texas Department of Transportation (TxDOT), and Texas Water Development Board (TWDB).

Experience

KDA RiskMAP CTP Contract, Lower Kansas River Basin, FEMA/Kansas Department of Agriculture, Eudora, KS.

Water resources engineer responsible for enhancing existing Zone A study to Zone AE study using HEC-RAS and ArcGIS Pro. Responsibilities include ortho correcting streamline, drawing break lines, and delineating 10year, 100year, 500year floodplains together with water surface elevation grids.

Duration: 04/2022-Present

TXDOT I-35 NEX Design-Build, San Antonio, TX.

Hydraulic Technical Lead responsible for developing a drainage and mitigation plan for the Interstate Highway 35 design-build project near the city of Live Oak and the city of Selma in Texas. The project has multiple design teams working together. My team performed hydrologic and hydraulic analyses of the culverts in our study area. Tasks include calculating the 100-year water surface elevation for FEMA major crossing using the HEC-RAS model of the creek and design of a detention pond using the XPSWMM software. XPSWMM and EPASWMM were used to compute the amount of storage volume required to mitigate the increased inflows due to added impervious cover.

Duration: 03/2021-01/2022

South Carolina DOT Bridge Scour Analysis, Greenville, SC.

Water Resources Engineer responsible for performing scour analysis using the South Carolina bridge scour envelope curve method provided in USGS spreadsheet templates. The role required gathering high watermark elevations

from as-builts and calculating contraction, abutment, and pier scour using floodplain approach width, the geometry of the piers, and other hydraulic parameters specific to the bridge.

Duration: 04/2021-05/2021

Harris County Flood Control District, E-09 Subdivision Drainage Project for Parkway Mobile Homes, Houston, TX.

Project Engineer performing a hydraulic study of current flooding conditions near the King Parkway Mobile Homes community in Houston, Texas. The project improved the internal drainage system that conveyed stormwater from neighborhoods to P122-00-00 drainage channel and Greens bayou maintained by the Flood Control District. XPSWMM was used to analyze the benefits of providing mitigation measures like increasing system capacity, detention pond and a berm. 2D flood map exhibits of various mitigation alternatives were created for the Project progress and community engagement meetings of Harris County 2018 Bond program.

Duration: 04/2021-08/2021

TXDOT Mykawa Road & CenterPoint Bike Trail, Pearland, TX.

Project Engineer responsible for the detention pond design to mitigate impact of added impervious cover due to impervious trail construction along Mykawa Road using the City of Houston's Infrastructure Design Manual. The project required review of the construction plans and topography data for the trail to calculate the ditch capacity. He calculated the detention volume required and the size of the restrictor pipe based on the Policy, Criteria, And Procedure Manual of Harris County.

Duration: 12/2020-01/2021

Hawaii Department of Transportation, Bridge Scour Evaluations, Kauai, HI.

Water Resources Engineer in a team that provided general hydraulic engineering services for the State of Hawaii. He performed hydrologic calculations, hydraulic modeling, and scour evaluations for the bridges on Honamanu, Kailua, and Nailiilihaele rivers. Stream stats data was derived from the USGS website to run hydraulic simulations in HEC-RAS. He performed bridge scour analysis using Hydraulic Toolbox and evaluated the total scour depth for the existing bridge piers over the creek.

Duration: 10/2020-02/2021

San Tan Valley Area Drainage Master Plan Proposal, Pinal County, AZ.

Project Engineer designing GIS maps showing hydrology features such as fissures, canal overchute, watershed, FEMA flood insurance rate map, and study area boundaries for a drainage master plan proposal work for San Tan Valley community in Pinal County, Arizona.

Duration: 09/2020-11/2020

Harris County, CE King Parkway from Tidwell Rd to Garrett Road, Houston, TX.

Engineer in Training on a new bike trail project for Harris County which included a bridge over a creek. I calculated the flows in HEC-HMS. I performed HEC-RAS analysis to determine the 100-year and 500-year water surface elevations in the existing conditions and the proposed conditions with the proposed pedestrian bridge.

Duration: 08/2020-07/2021

TXDOT, I-10 Reconstruction Project, El Paso, TX.

Engineer in Training on a team that developed a drainage design for the reconstruction project of Interstate Highway 10 near El Paso. He performed time of concentration calculation, delineation of external drainage areas, land use delineation, and classification into paved and unpaved surfaces. He used Bentley MicroStation and GEOPAK software to perform the design of stormwater system plans & profiles.

Duration: 07/2020-08/2020

CTTS Capital Improvement Planning Study, Austin, TX.

Engineer in Training working on the central Texas turnpike system planning study in Austin, Texas. He identified the detention/storage location due to the added impervious area for the ultimate increase in the pavement. He created two polygon shapefiles in ArcMap that showed the added impervious Area in the proposed condition. He created the first one for the long-term improvements and the second one for the mid-term improvements around the State Highway-45 and Texas 1 Loop corridors.

Duration: 07/2020-08/2020

FEMA COMPASS PTS JV Contract, Region VI FY20 Risk MAP PTS for Leon Creek Watershed, Federal Emergency Management Agency, Mason County, TX.

Water Resources Engineer responsible for developing detailed hydraulic models. Major tasks include creating the shapefiles for flow paths, channel bank lines, cross-sections, basins, and manning's N value polygon. Watershed information system (WISE) to create detailed models for HEC-RAS. Detailed modeling required adding the survey structures to the model. Major accomplishments include performing field recon for verifying hydraulically significant areas, landcover evaluation, developing Zone A & AE hydraulic models.

Duration: 06/2020-07/2020

TWDB 2D BLE, Nacogdoches, TX.

Water Resources Engineer part of a team that developed a test model for the Lavaca Creek watershed in Nacogdoches County. He kept all inputs (besides terrain) the same, to truly compare impacts of using different terrain resolutions 1m, 5 ft, and 10 ft. His role was to create a 2D flow area, computational mesh, break line, and boundary conditions, and then run the model. He calculated the amount of computational time, file size to determine which option would provide the best benefit for the desired quality of results.

Duration: 06/2020-07/2020

TWDB, Technical Guidelines for Regional Flood Planning, Austin, TX.

Water Resources Engineer helping develop Technical Guidelines for Regional Flood Planning for the Texas Water Development Board. His role was to provide internal review from an outsider perspective & provide comment to improve the user experience. He calculated the estimate on time requirements for the Regional Flood Planning Group (RFPGs) to rank each project. He opened each shapefile and HEC-RAS model and estimated the time it took to review each file.

Duration: 05/2020-07/2020

Upper Brushy Creek WCID, Dam 8 – Modernization, Cedar Park, TX.

Water Resources Engineer re-designing and widening the secondary spillway of Dam 8; to safely pass the probable maximum flood. Dam 8 is a reservoir on lake creek in Williamson County, Texas. The design was performed to make sure the 24-hour, 75% PMF event, velocities within the auxiliary spillway did not breach the vegetated surface of the spillway, protecting it against erosion and preventing dam failure. As part of the design, he had to build a 2-D HEC-RAS model of the dam. He created the 2D HEC-RAS models, ultimate land use shapefiles, and generating flood maps for 100-year existing and proposed conditions.

Duration: 10/2019-04/2020

FEMA COMPASS PTS JV Contract, Region VI FY19 Risk MAP PTS for several HUC 10 Watershed, Federal Emergency Management Agency, OK, TX.

Water Resources Engineer responsible for developing base level engineering hydraulic models. Major tasks include creating the shapefiles for flow paths, channel bank lines, cross-sections, basins, and manning's N value polygon. Created base-level engineering models and digital flood insurance rate maps (DFIRM) for FEMA's Estimated Base Flood Elevation (BFE) viewer (usgs.gov). He performed hydrologic and hydraulic (H&H) modeling on several watersheds supervised by FEMA region 6. In Oklahoma he worked on Sans Bois creek sub-watershed (HUC10) near Robert S. Kerr Reservoir in Haskell County. In Texas he worked on La Parita Creek sub-watershed in the Atascosa River watershed in Atascosa County, Old River sub-watershed in the lower Brazos little Brazos watershed in northeastern Burleson County, Cabeza Creek sub-watershed in the Lower San Antonio River watershed in Goliad County, Yeager Creek sub-watershed in the Lower Frio watershed in Blanco County, East Yegua Creek sub-watershed in the Yegua Creek watershed in Burleson-Lee County, Palo Gaucho Bayou sub-watershed in the Toledo Bend reservoir watershed in Sabine County.

Duration: 02/2019-05/2020

Natural Resources Conservation Service (NRCS), Dam Breach Modeling

Water Resources Engineer designing floodplain maps and then building a floodplain risk map book on 1:600 scale in Arc Map using Data Driven Pages. He also developed hydrologic and hydraulic models including 1D/2D models to support planning and design level projects. He performed sunny day dam breach 2-D modeling for NRCS dams using HEC RAS 5.0.3.

Duration: 05/2018-06/2018

Tarrant County juvenile detention center, Detention Pond design, Tarrant County, TX.

Water Resources Engineer designing a detention pond for the Tarrant County juvenile detention center. He computed the time of concentrations and flows for the stormwater collection system by using rational methods.

Duration: 06/2018-07/2018

North Texas Municipal Water District, Phase 4 Pipeline alignment study, McKinney, TX

Project Engineer preparing technical and non-technical reports and presentations including visualization of data for a pipeline alignment study for the environmental engineering group and helped in writing right of entry letters to be sent to property owners.

Duration: 07/2018-08/2018