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### NEIL C. NOWAK, P.E. (COLORADO PE #34794)

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### Education

BS, Civil/Forest Engineering, State University of New York –   
College of Environmental Science and Forestry in conjunction   
with Syracuse University, 1986

### Professional Licenses

Professional Engineer

(record at NCEES)

Colorado

Utah

Wyoming

New Mexico

Nevada

Montana Arizona

North Dakota Idaho

Texas

South Dakota

Oklahoma

### Professional Affiliations

Solid Waste Association of North America (SWANA) since 1991

Member of the Board of Directors – Colorado Chapter since 2006

President – since 2023

Produced Water Society

Fabricated Geomembrane Institute

### Professional Experience

Mr. Nowak has over 37 years of experience in the consulting engineering industry, including civil, solid waste, produced water impoundments, stormwater engineering, geotechnical, and construction projects. Expertise includes project management, building client relationships, managing budgets and schedules, building and guiding successful teams, and effectively utilizing project resources. His experience includes several front-range and mountainous landfills and produced water facilities in Texas, Colorado, and other states as described below.

Engineering experience includes the design of landfill cap and baseliner systems, landfill gas collection and migration systems, engineering, design and operations plans, produced wastewater evaporation ponds, SPCC Plans, stormwater management plans, stormwater controls, geotechnical and geosynthetic analyses and applications, grading plans, environmental monitoring programs, construction certification, mold investigation, aerial photography, and land surveying.

Construction quality assurance experience includes landfill baseliners and caps, geotechnical, oil and gas waste landfills, produced water evaporative ponds, demolition of underground storage tanks, the lining of stormwater channels, establishment of wetlands, and restoration of disturbed areas with indigenous species of vegetation.

Mr. Nowak has managed environmental compliance and landfill construction quality assurance activities for multiple sites in several states. He has attended numerous public comment meetings and county commissioner meetings where he has prepared and presented various levels of project details for review and approval. He has been retained as an engineering expert for various civil projects relating to impoundment design and construction, geotechnical analyses, geosynthetics analyses, and landfill gas.

Professional experience includes serving on the Board of Directors for the Colorado Chapter of SWANA since 2006 and is currently the chapter President. He has worked closely with various local, state, and federal regulatory agencies to ensure that engineering deliverables comply with all current applicable requirements. Also is an active member of the Produced Water Society, regularly making presentations at their seminars since 2009. As an associate member of the Fabricated Geomembrane Institute, Neil prepared and presented a CQA seminar and developed questions and answers for an online CQA course and certificate.

### Example project experience includes:

**Garfield County Landfill, Rifle, Colorado:** Mr. Nowak serves as the Project Director for SCS Engineers on the engineering and environmental projects for the Garfield County Landfill. Projects included groundwater monitoring, landfill gas monitoring, reporting to CDPHE, revision and improvement of the engineering design and operations plan (EDOP), and special waste reviews.

**Republic Services, Inc., Bondad Landfill, Durango, Colorado:** Mr. Nowak was the Project Director for the engineering and design components of the project, including the revisions to the existing engineering design and operations plan (EDOP) to include the expansion of the landfill with Cell 10, Cell 11, and Cell 12. The design work included the design of the baseliner, leachate collection, and drainage related to Cells 10, 11, and 12. SCS also performed the CQA of the construction of the approved Cell 10, Cell 11E, and 11W.

**Summit County Resource Allocation Park (SCRAP), Dillon, Colorado:** Mr. Nowak served as the Project Director for SCS Engineers on the engineering and environmental projects for over 5.5 years at the Summit County Resource Allocation Park (SCRAP). Projects included groundwater monitoring, revision and improvement of the engineering design and operations plan (EDOP), compost EDOP, air quality permitting, geotechnical analyses, stormwater design and management, SPCC Plan and inspections, and miscellaneous engineering tasks. Professional Engineer of record, including facility drawings, operational information, and inspection records, and signed/sealed the SPCC plan.

**Denver Arapahoe Disposal Site (DADS), Aurora, Colorado:**  Mr. Nowak served as the Project Director in charge of the construction plans and specifications for the Phase 9 cell construction, the Phase 9 cell CQA, and approval from CDPHE. Also, the asbestos cell construction plans, CQA and CDPHE approval, and the vegetative assessments performed on the final covered areas at the facility in 2014 through 2017 for Waste Management of Colorado.

**Buffalo Ridge Landfill, Keenesburg, Colorado:**  Mr. Nowak served as the Project Director in charge of the construction plans and specifications for the Phase 1G cell construction, and the Phase 1G cell CQA and approval from CDPHE for Waste Management of Colorado. Also, the leachate management study and design to separate oil and water due to large amounts of oilfield wastes, including the frac tanks, piping, tank containment, and solar power design.

**City of Casper Landfill – Old Landfill Remediation:** Mr. Nowak serves as the Project Manager/Director for the remedial design of the final cover improvements and landfill gas migration monitoring and cut-off.

**South Canyon Landfill, Glenwood Springs, Colorado:** Mr. Nowak has served as the Senior Engineer for engineering projects at the facility. Previously, he served as the Senior Project Manager in charge of stormwater compliance; design of, construction quality assurance and certification of the old landfill cut-off trench and leachate holding impoundment, expansion area geologic investigation and new groundwater well installations for establishment of baseline water quality in the expansion area. On-hand experience and familiarity with site conditions.

**Milner Landfill, Milner, Colorado:** Mr. Nowak served as the Senior Project Manager in charge of the stormwater compliance, and permit finalization, including coordinating geologic investigation of the underground coal mine below the landfill, construction quality assurance and certification of one lined landfill cell, and construction quality assurance of the solidification basin. On-hand experience and familiarity with site conditions. Presented to the Routt County commissioners proposed permit modifications where the county approved the design and granted the Certification of Designation to be modified as offered. Currently, Project Management of groundwater monitoring semi-annual reporting.

**Missoula Landfill, Missoula, Montana:** Mr. Nowak serves as the Project Manager for the annual compliance groundwater sampling and Landfill Gas Migration Monitoring for the Republic Services, Inc. Missoula Landfill.

**North Weld Landfill, Ault, Colorado:**  Mr. Nowak served as the Project Director in charge of the vegetative assessments performed on the final covered areas at the facility in 2014 through 2017 for Waste Management of Colorado.

**Conservation Services Inc. Landfill, Bennett, Colorado:**  Mr. Nowak served as the Project Director in charge of the vegetative assessments performed on the final covered areas at the facility in 2014 through 2017 for Waste Management of Colorado.

**Colorado Springs Landfill, Colorado Springs, Colorado:**  Mr. Nowak served as the Project Director in charge of the vegetative assessments performed on the final covered areas at the facility from 2014 through 2017 for Waste Management of Colorado.

**Midway Landfill, Pueblo, Colorado:**  Mr. Nowak served as the Project Director in charge of the vegetative assessments performed on the final covered areas at the facility in 2014 through 2017 for Waste Management of Colorado.

**Eagle County Landfill, Wolcott, Colorado:** Mr. Nowak served as the Senior Project Manager in charge of the stormwater compliance, cell design, and CQA, Phase 2 expansion investigation, including coordinating the geologic investigation, construction quality assurance, and certification of the waste tire facility, and construction quality assurance of the solidification basin. On-hand experience and familiarity with site conditions.

**Edgemere Landfill, Queens, New York – City of New York Department of Sanitation:** Mr. Nowak served as the Project Manager in charge of the 102-acre landfill cap permit design, construction plans, specifications, cost estimate, USACOE wetlands remediation, stormwater design, barge off-loading facility subcontractor design, construction support by design engineer during construction, and landfill gas control, piping, and flare design. The project cost for the permitting, design, and construction was $45 million. He attended the public presentation meetings, where the local community was highly vocal, and worked together with the NYCDOS and the community to complete the project to the satisfaction of the parties involved.

**Oceanside Landfill, Hempstead, New York – Town of Hempstead, New York:** Mr. Nowak served as the Project Manager in charge of the landfill cap permit design, landfill gas controls, construction plans, specifications, cost estimate, construction quality assurance, and as-built report. The landfill is 100 acres in size and 80 feet above the surrounding grade.

**Fresh Kills Landfill, Staten Island, New York – City of New York Department of Sanitation:** Mr. Nowak served as the Project Manager in charge of the landfill gas migration monitoring at the 2,500-acre solid waste facility.

**Expert Testimony – Landfill Gas Migration, Oceanside Landfill, Hempstead, New York:** Mr. Nowak was retained and deemed to be an expert to provide testimony regarding landfill gas migration at an existing landfill, including deposition and document review related to landfill gas, and topography interpretation.

**City of Sheridan Landfill – Landfill Remediation Program with the Wyoming Department of Environmental Quality:** Mr. Nowak served as the Professional Engineer responsible as the engineer of record for the Assessment of Corrective Measures Report for remediation alternatives at the City of Sheridan Landfill to reduce impacts to groundwater.

**Silo Field Facility, Cheyenne, Wyoming – R360 Environmental Solutions:** Mr. Nowak served as the Senior Project Manager in charge of the site investigation, geologic drilling, topographic mapping, permit design and report, construction design, construction plans, construction specifications, financial assurance, closure plan, QA/QC Plan, stormwater plan, surface water appropriations permit, groundwater supply well, construction documentation report and certification, and air permit. The facility permit consists of 10 - five-acre double-lined high-density polyethylene (HDPE) impoundments all with leak detection used for evaporation of produced/flow back water from the oil and gas industry in the area. The Wyoming Department of Environmental Quality and Water Quality Division approved the permit and construction.

**Bluegrass Water Wright Facility, Wright, Wyoming – Bluegrass Water, LLC:** Mr. Nowak served as the Project Director in charge of the creation and completion of the permit documents, construction design, construction plans, construction specifications, financial assurance, closure plan, and construction quality assurance (CQA) of Ponds 1-8 and the certification of the construction to WDEQ. The facility permit consists of eight – eight-acre double-lined high-density polyethylene (HDPE) impoundments all with leak detection used for evaporation of produced/flow-back water from the oil and gas industry in the area. The Wyoming Department of Environmental Quality and Water Quality Division approved the permits and construction.

**Southern Cross Facility, Dad, Wyoming:** Mr. Nowak served as the Project Director in charge of the project that has included or now includes the site investigation, geologic drilling, topographic mapping, permit design and report, construction design, construction plans, construction specifications, financial assurance, closure plan, QA/QC Plan, stormwater plan, surface water appropriations permit, groundwater supply well, construction documentation report and certification, and air permit. The facility permit consists of eight - five acre double lined high-density polyethylene (HDPE) impoundments all with leak detection used for evaporation of produced/flowback water from the oil and gas industry in the area. The Wyoming Department of Environmental Quality and Water Quality Division approved the permit and construction.

**Orla Oilfield Waste Landfill STF Facility, Orla, Texas – Milestone Environmental Solutions:** Mr. Nowak serves as the Project Director in charge of the topographic mapping, permit design and report, construction design, construction plans, construction specifications, financial assurance, closure plan, QA/QC Plan, geotechnical analyses, and stormwater plan. The facility permit consists of 12 – seven-acre landfill disposal cells all with leak detection to dispose of solid wastes from the oil and gas industry in the area. The Railroad Commission of Texas approved the permit and construction of the first four landfill cells and drying cells are completed and operations are underway.

**UPTON 349 Oilfield Waste Landfill STF Facility, Rankin, Texas – Milestone Environmental Solutions:** Mr. Nowak serves as the Project Director in charge of the topographic mapping, permit design and report, construction design, construction plans, construction specifications, financial assurance, closure plan, QA/QC Plan, geotechnical analyses, and stormwater plan. The facility permit consists of eight – ten-acre landfill disposal cells all with leak detection to dispose of solid wastes from the oil and gas industry in the area. The Railroad Commission of Texas approved the permit and construction is of the first cell and drying cells area completed and operations are underway.

**Wishbone Facility, Catarina, Texas – R360 Environmental Solutions:** Mr. Nowak served as the Senior Project Manager in charge of the topographic mapping, permit design and report, construction design, construction plans, construction specifications, financial assurance, closure plan, QA/QC Plan, stormwater plan, construction documentation report, and certification. The facility permit consists of two - seven acre double lined high-density polyethylene (HDPE) impoundments used for evaporation of produced/flow back water and 10 – five-acre landfill disposal cells all with leak detection to dispose of solid wastes from the oil and gas industry in the area. The Railroad Commission of Texas approved the permit and construction.

**Eagle Ford West Facility, Stanton, Texas – R360 Environmental Solutions:** Mr. Nowak served as the Senior Project Manager in charge of the topographic mapping, permit design, and report, construction design, construction plans, construction specifications, financial assurance, closure plan, QA/QC Plan, stormwater plan, construction documentation report, and certification. The facility permit consists of one - six-acre double-lined high-density polyethylene (HDPE) impoundment used for evaporation of produced/flow back water and five – five-acre landfill disposal cells all with leak detection to dispose of solid wastes from the oil and gas industry in the area. The Railroad Commission of Texas approved the permit and construction.

**Capio/Fidelis Carbon Sequestration – Class V Test Well, Sherbourne, Louisiana.** SCS Engineers completed the permitting and construction of a Class V test well at the Sherbourne, LA location in anticipation of performing formation testing for carbon capture in the area. Mr. Nowak served as the project manager of the construction of the drill rig work pad, drainage, work pad surface stabilization, containment in a state wetland, and restoration. Also, construction of the access road improvements over Union Pacific Railroad tracks, including safety, railroad flagging, and guardrails.

**WaterBridge Resources, LLC – Five Separate Recycled Water Pond Facilities Permian Basin Texas.** Mr. Nowak served as the Project Director in charge of the site investigation (geologic and topographic), creation, and submittal of Railroad Commission of Texas (RRC) compliant permit application documents, construction technical specifications, and construction quality assurance for dual ponds at approximately 500,000 barrels capacity each pond. The ponds are double-lined with geomembrane and leak detection.

**XRI – Fountain Quail Water Management, LLC – Recycled Water Pond Facilities Permian Basin Texas.** Mr. Nowak served as the Project Director in charge of the site investigation (geologic and topographic), creation, and submittal of Railroad Commission of Texas (RRC) compliant permit application documents, construction technical specifications, and construction quality assurance for dual ponds at approximately 500,000 barrels capacity each pond. The ponds are double lined with geomembrane and leak detection.

**Recover Howard Oilfield Waste Recycling Facility, Howard County, Texas – Recover Energy:** Mr. Nowak served as the Project Director in charge of the creation and submittal of the Texas Railroad Commission permit application. The project included the completion of geologic borings, topography, and geotechnical analysis, and the creation and submittal of the RRC permit application for the design of an oilfield waste recycling facility. The project was reviewed and approved with a permit approved by RRC to Recover Energy, including air permitting.

**Impoundment Leak Analysis, Pecos, Texas – Brown Pruitt Wambsganss Ferrill & Dean, PC:** Mr. Nowak provided engineering expertise regarding two geomembrane-lined produced water impoundments near Pecos, Texas.

**Danish Flats Facility, Cisco, Utah:** Mr. Nowak served as the Senior Project Manager in charge of the site investigation, geologic drilling, topographic mapping, permit design and report, construction design, construction plans, construction specifications, financial assurance, closure plan, QA/QC Plan, stormwater plan, construction documentation report and certification, and air permit. The facility permit consists of 20 - five-acre single-lined high-density polyethylene (HDPE) impoundments with leak detection used for evaporation of produced/flow-back water from the oil and gas industry in the area. The Utah Department of Natural Resource, Water Quality Division approved the permit and construction.

**SPCC Plans – Numerous Clients.** Mr. Nowak has prepared and signed/sealed with his professional engineering license in various states numerous SPCC Plans for various clients, including as examples: Sentinel Peak Resources, ACI Jet, Central Coast Agriculture in California; Bluegrass Produced Water in Wyoming; Milestone Environmental Services, XRI, WaterBridge Resources in Texas; Black Tea Oil in Kansas; and Nautilus Poplar Oil Fields (Magellan) in Montana.

**Black Tea Oil, Logan/Gover County Kansas:**  Professional Engineer of record and signed/sealed the all-encompassing SPCC Plan for 20 sites from the individual plans, owned by Black Tea Oil and managed the site visits to inspect and record site conditions, and accuracy of individual SPCC Plans compared to tanks and secondary containment present on-site.

**Magellan Petroleum Corporation, Poplar Oilwell Fields, Montana:** Professional Engineer of record, and signed/sealed the SPCC Plan for 18 tank batteries, which included facility drawings, operation information, inspection records, containment calculations, and control measures. Managed the site inspections and reporting of the conditions for inclusion in the final SPCC Plan.

**Hanford Facility:** Managed the Design Analysis Variance Report (DAVR) for the Environmental Restoration Disposal Facility (ERDF) Cells 9 and 10 at the Department of Energy’s (DOE) Hanford Facility in the eastern area of the State of Washington. Also, Neil provided a quality assurance review of the technical specifications for this project.

#### Presentations/Papers

*HDPE Lined Produced Water Evaporation Ponds,* Geosynthetics 2009, Salt Lake City, Utah, February 2009, Geosynthetics 2013, Long Beach, California, April 2013, and Geosynthetics 2015, Portland, Oregon, February 2015, and Houston, February 2019. Webinar presentation February 2021.

*Energy Industries using HDPE for Flow-back Water Evaporation/Recycling Ponds*, Geosynthetics Magazine, October/November 2021.

*HDPE Lined Produced Water Evaporation Ponds,* 17th, 18th, 19th, 21st, 22nd, 23rd, 24th, and 25th International Petroleum Environmental Conference (IPEC), San Antonio, Texas, August 2010, Houston, Texas, November 2011, Denver, Colorado, October 2012, Houston, Texas, October 2014, October 2015 Denver, Colorado, New Orleans, Louisiana, November 2016, San Antonio, Texas 2017, Denver, Colorado 2018, and San Antonio, Texas 2019. IPEC Connect online presentation April 2022.

*HDPE Lined Produced Water Evaporation Ponds,* 21st, 22nd, 23rd, 25th, and 27th Annual Produced Water Society Seminar, Houston, Texas, January 2011, January 2012, January 2013, January 2015, January 2018, September 2021, and February 2024; and in Midland, Texas in August 2018, August 2019, and August 2022.

*HDPE Lined Produced Water Evaporation Ponds,* Shale Water Expo, Houston, Texas, October 2015 and October 2019.

*HDPE Lined Produced Water Evaporation Ponds,* Global Waste Symposium, Phoenix, Arizona, October 2012 (poster session), and Palm Springs, California, February 2016 (presentation).

*The Role of HDPE Lined Ponds in Treating Water for the Oil and Gas Industry,* Oil, Gas and Mining Magazine, March 2014.

*HDPE Lined Produced Water Evaporation Ponds,* 2010 Energy Resources Produced Water Conference, University of Wyoming, Laramie, Wyoming, May 2010.