

Mark Glenn, P.E.

PRESIDENT AND PRINCIPAL-IN-CHARGE

President and principal-in-charge of a full-service consulting engineering firm. Experience includes advanced water/wastewater treatment facilities; water transmission, distribution, storage and pumping systems; wastewater collection, conveyance and pumping systems; combined sewer overflow (CSO) analysis and modeling; CSO storage and pumping systems; dams and reservoirs; spillways and intake structures; groundwater hydrology and well field development; and stormwater management. Expertise includes bridges and transportation design; buildings and structures; valuation and rate studies; infrastructure systems and facilities planning; capital project financing; and municipal operations consultation. Engineer-of-Record for hundreds of projects with a current value of \$1.7 billion.

Key Projects

Cobun Creek Dam No. 2, Morgantown Utility Board, Monongalia County, WV. Engineer-of-Record for the design of a new \$40 million water supply dam and 375 million gallon reservoir for the Morgantown regional water system. Project elements included 75 ft. high zoned earth embankment (500,000 CY), internal drainage system, ogee-weir overflow spillway, intake tower, and 66 inch PCCP outlet conduit.

Water and Wastewater System Improvements, Clearfield Municipal Authority, Clearfield County, PA. Engineer-of-Record for multiple projects totaling \$65 million for Clearfield Municipal Authority. Projects included Biological Nutrient Removal (BNR) wastewater plant upgrade and expansion, dam renovations, Moose Creek membrane filtration water treatment facility, pumping stations, water storage tanks, transmission mains, well field development, distribution system improvements, sanitary sewer rehabilitation and interceptor and outfall sewers. Additional work includes system-wide master planning, hydraulic and evaluation financial studies.

Biological Treatment Nutrient Removal (BNR) Upgrades at Easterly and Westerly Wastewater Treatment Facilities, Altoona Water Authority, Blair County, PA. Engineer-of-Record for the original \$85 million plant upgrade and expansion as well as the first CSO control facilities in Pennsylvania. Project principal for the \$70 million BNR upgrade and expansion project at the Westerly and Easterly wastewater treatment facilities. Unit operations include vortex grit separators, fine screens, nutrient removal technology reactors, clarifiers, aeration and mixing systems, wet weather step-feed system, UV disinfection, effluent screw lift flood pumps and new sludge handling systems. Recipient of 2013 American Academy of Environmental Engineers "Superior Achievement Award" and 2014 Engineering News Record "Mid-Atlantic Region Honor Award (Water/Wastewater)".

Education

Environmental Engineering,
Graduate Work, Worcester
Polytechnic Institute

MS - Civil Engineering, New Jersey
Institute of Technology

IWPC Biological Treatment
Certificate, Manhattan College

BS - Civil Engineering Technology,
University of Pittsburgh

Registration

Pennsylvania (PE. 30528)

West Virginia (PE. 13375)

Maryland (PE. 22577)

Virginia (PE. 31894)

New York (PE. 74992)

Delaware (PE. 11160)

Ohio (PE. 61312)

New Jersey (PE. 40844)

Honors & Awards

American Academy of Environmental
Engineers - 2013 Superior
Achievement Award

American Society of Civil Engineers
(Pittsburgh Chapter) Award of Merit

Engineering News Record (ENR)
2014 Mid-Atlantic Region Honor
Award (Water/Wastewater)

ACEC/PA Diamond Award - Water
Resources, 2001, 2006, 2013

Altoona Blair County (PA) Chamber of
Commerce - 2014 Technology Award

PA Governor's Award for
Environmental Excellence - 1999

Association of State Dam Safety
Officials - 1996 Regional Award of
Merit

Affiliations

American Academy of Environmental Engineers, Diplomate
American Academy of Water Resources Engineers, Diplomate
American Society of Civil Engineers
American Water Works Association
Association of State Dam Safety Officials
Water Environment Federation
United States Society of Dams

Publications & Presentations

“Reservoirs of the Horseshoe Curve, the Making of an American Water Landmark,” 2017
AWWA-PA - “Clearfield Water System Improvements,” 2014
ASDSO - “Bakerton Dam Rehabilitation,” 2006
ASDSO - “Tipton/Blair Gap Dam Rehabilitation,” 2005 (Co-Author)
ASDSO - “Lake Altoona Dam Rehabilitation,” 2001
ASDSO - “Rehabilitation of Singer’s Gap Dam,” 1999 (Co-Author)
ASCE Water Resources - “State College Water Distribution System Modeling,” 1998 (Co-Author)
ASCE Geotechnical Division - “Rehabilitation of Plane Nine Dam,” 1993 (Co-Author)

Academic Experience

St. Francis University, Adjunct Instructor
- Environmental Engineering
St. Francis University, Guest Lecturer

Dam Improvements, Altoona Water Authority, Blair County, PA. Engineer-of-Record for \$40 million dam improvement projects including Kittanning Point, Cochran-Impounding, Lake Altoona, Mill Run, Bellwood, Kettle, Homer Gap and Plane 9 dams featuring embankment improvements, new spillways, intake towers, drilling and grouting, floodwalls and levees, tunnels and channels.

North Fork Creek Water Treatment Facility (WTF) and Wastewater Treatment Facility (WWTF) Upgrade and Expansion, Brookville Municipal Authority, Jefferson County, PA. Engineer-of-Record for new \$12 million membrane filtration WTF and \$20 million WWTF upgrade and expansion. WTF project included coagulation, flocculation, sedimentation, UV disinfection, and clearwell. The WWTF project featured new headworks, raw sewage pumping facility, BNR reactors, clarifiers, UV disinfection, aerobic sludge digestion conversion and pump stations.

Water and Wastewater System Improvements, Altoona Water Authority, Blair County, PA. Engineer-of-Record for projects totaling \$150 million for Altoona Water Authority. Project elements include new city Low Service/High Service storage tanks, transmission and distribution mains, booster pumping lift and pressure reducing stations, valve and metering vaults, wastewater pumping stations, force mains, I/I sewer diagnostic and rehabilitation projects, combined sewers, relief sewers, interceptor and outfall sewers. Work included system-wide master planning and hydraulic studies, CSO characterization and downstream receiving water quality analysis, system valuation, financial and rate studies and operational consultation.

Reservoir Operation and Management Plan, Altoona Water Authority, Blair County, PA. Project manager for a 13-reservoir operation and management plan for the Altoona Water Authority. Utilized RES-SIM software to model a 65-year period of record for various reservoir operational scenarios. Project included statistical analysis, drought management plan, water quality analysis, treatment and supply cost evaluation, hydrologic and stochastic analysis, and safe yield and reservoir reliability evaluation.

Water System Improvements, State College Borough Water Authority, Centre County, PA. Engineer-of-Record for water system improvements totaling \$80 million for State College Borough Water Authority. Projects included two membrane filtration/granulated activated carbon water treatment facilities, water storage tanks, pumping stations, 150,000 LF 16-20” water transmission mains, distribution system improvements and three high capacity well field development facilities. Additional work included system-wide hydraulic modeling study, master planning, and programming and operations consultation.

Water System Improvements, Lewistown Municipal Authority, Mifflin County, PA. Engineer-of-Record for \$35 million water system improvement project for the Lewistown Municipal Authority. Project elements include upgrade and expansion of 6.0 million gallon per day (MGD) water treatment plant with ozonation and conventional multi-media filtration, 2.0 MG Ord’s Ridge storage tank, 2.0 MGD Kish Valley well field development, 0.5 MG Derry Twp. storage tank, 225,000 LF transmission and distribution mains, Lewistown waterlines upgrade (15,000 LF) and Belleville service area improvements (0.25 MG tank and 8,000 LF of 12” water main).

Water Treatment Facility, City of Moundsville, Marshall County, WV. Engineer-of-Record for new \$18 million, 3.5 million gallons per day WTF for the City of Moundsville. Project included ozonation, direct filtration, nanofiltration membrane system and automatic backwash filtration systems.

Potomac River Water Treatment Facility and Water Transmission Mains, Berkeley County Public Water Service District, Martinsburg, WV. Engineer-of-Record for \$34 million water system improvements project. Project included new Potomac River WTF including rapid mix, coagulation/flocculation tanks, sedimentation, submerged membrane filtration, UV disinfection, chemical feed systems, solids handling facilities, and 250,000 LF of 12-30" transmission mains.

PA County Bridge Replacement Program and NBIS Inspection, County Commissioners, Jefferson County. Engineer-of-Record for \$10 million bridge replacement program (14 structures) including 50-ft. single span to 250-ft. multi-span bridges with prestressed concrete (P/C) adjacent and spread box beams, steel girder and P/C I-beam structures in accordance with PennDOT District 10-0 requirements.

New County Administrative Office Building and Courthouse Renovations, County Commissioners, Bedford County, PA. Engineer-of-Record for \$18 million County office building complex for the Bedford County Commissioners. Project included historic preservation renovations of 175-year old courthouse and precast concrete parking garage.

Altoona Ballpark Complex, Altoona Baseball Properties, Logan Township Blair County, PA. Engineer-of-Record for site-civil work associated with the \$25 million baseball stadium. Project included 7,200 seat capacity stadium, 1,000-space, 3-tier, P/C-P/S parking garage, PennDOT access road improvements, stormwater management, surface parking, pedestrian walkways, construction stakeout, traffic studies and utility infrastructure.

Abandoned Mine Reclamation/Acid Mine Drainage Abatement Projects, PA DEP Bureau of Abandoned Mine Reclamation Project manager and Engineer-of-Record for numerous abandoned mine reclamation and acid mine drainage (AMD) abatement projects exceeding \$25 million in value. Projects conducted throughout Western Pennsylvania including basin-wide AMD studies, strip mine reclamation and restoration projects, refuse pile reclamation, abandoned gas well AMD discharge plugging, deep mine shaft sealing, hydraulic deep mine sealing, drilling and grouting, clay surface sealing, exploratory drilling and testing, slurry trench and clay blanket outcrop barriers, treatment evaluations of deep mine discharges, AMD water treatment facilities and passive SAP wetland treatment facilities.