

Annual Report of the Technical Advisory Committee for 2021

Established by Act 133 of the 2001 Adjourned Session Regarding Oversight and Implementation
of the **Wastewater System and Potable Water Supply Rules**

Presenting to VT Senate Committee of Institutions
February 8, 2022

Stephen Revell CPG, Licensed Designer, Hydrogeologist, TAC Executive Committee Member

Bruce Douglas PE, Onsite Wastewater Program Manager, ANR DEC DWGPD

Cristin Ashmankas, IA Technology Approvals, Designer Licensing Program, Regional Office
Compliance Program Supervisor, ANR DEC DWGPD



Composition of TAC

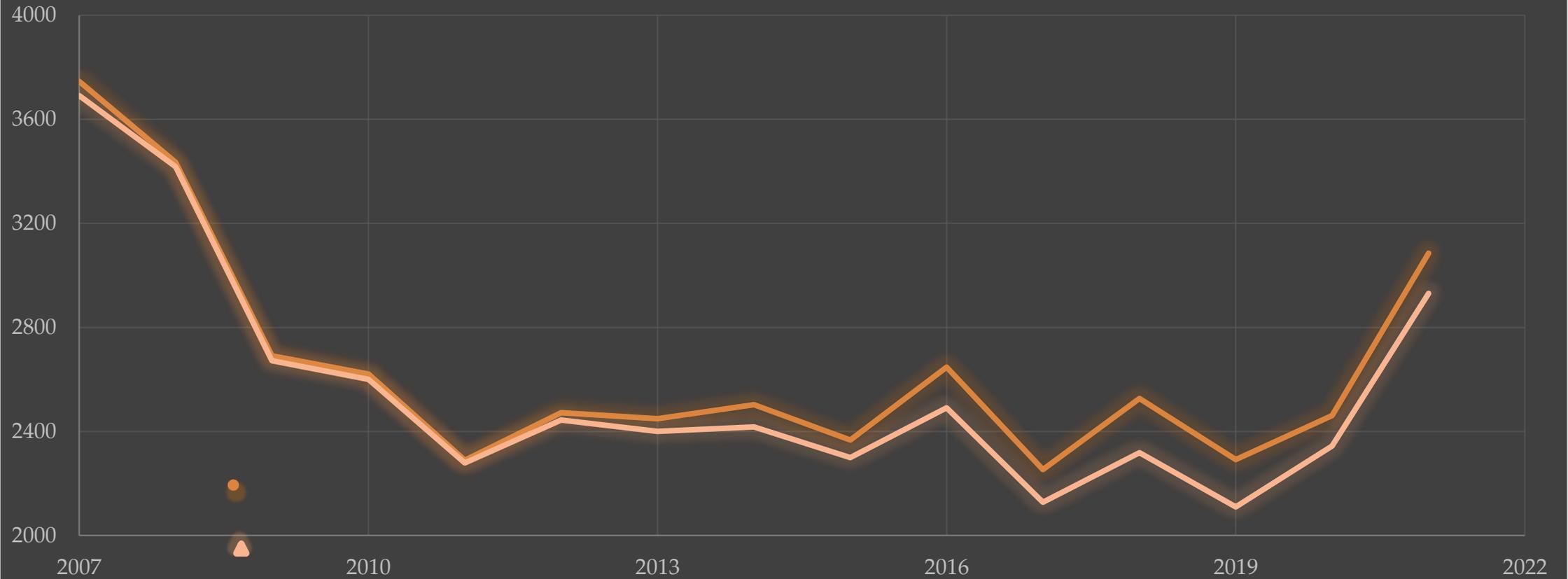
- 1+ Professional Engineer
 - 1+ Site Technician/Licensed Designer
 - 1+ Well Driller
 - 1+ Hydrogeologist
 - 1+ Delegated Municipality
 - 1+ Water Quality Specialist
 - 1+ Technical Staff of the Agency of Natural resources
 - 1+ Technical Staff of the Department of Health
- **Mark Bannon, P.E.**, Professional Engineer
 - **John Beauchamp, MWS, CI**, Master Water Specialist
 - **Grahame Bradley, PhD.**, Hydrogeologist/Soil Geologist, DWGPD
 - **Claude Chevalier**, Licensed Well Driller
 - **Ernie Christianson**, Regional Office Manager, DWGPD (retired)
 - **Mary Clark**, ID and UIC Program Manager, DWGPD (retired)
 - **Craig Heindel**, Hydrogeologist
 - **Craig Jewett, P.E.**, Professional Engineer
 - **Sille Larsen**, Senior Water Resources Engineer, Department of Health
 - **Gunner McCain**, Licensed Designer
 - **Stephen Revell**, Licensed Designer, Hydrogeologist
 - **Scott Stewart**, Hydrogeologist, DWGPD
 - **Denise Johnson-Terk**, Town Official, Licensed Designer
 - **Roger Thompson**, Licensed Designer
 - **Ken White**, Licensed Well Driller
 - **Justin Willis**, Licensed Designer
 - **Sheri Young**, Licensed Designer, Certified Professional Soil Scientist

Possible Topics for TAC

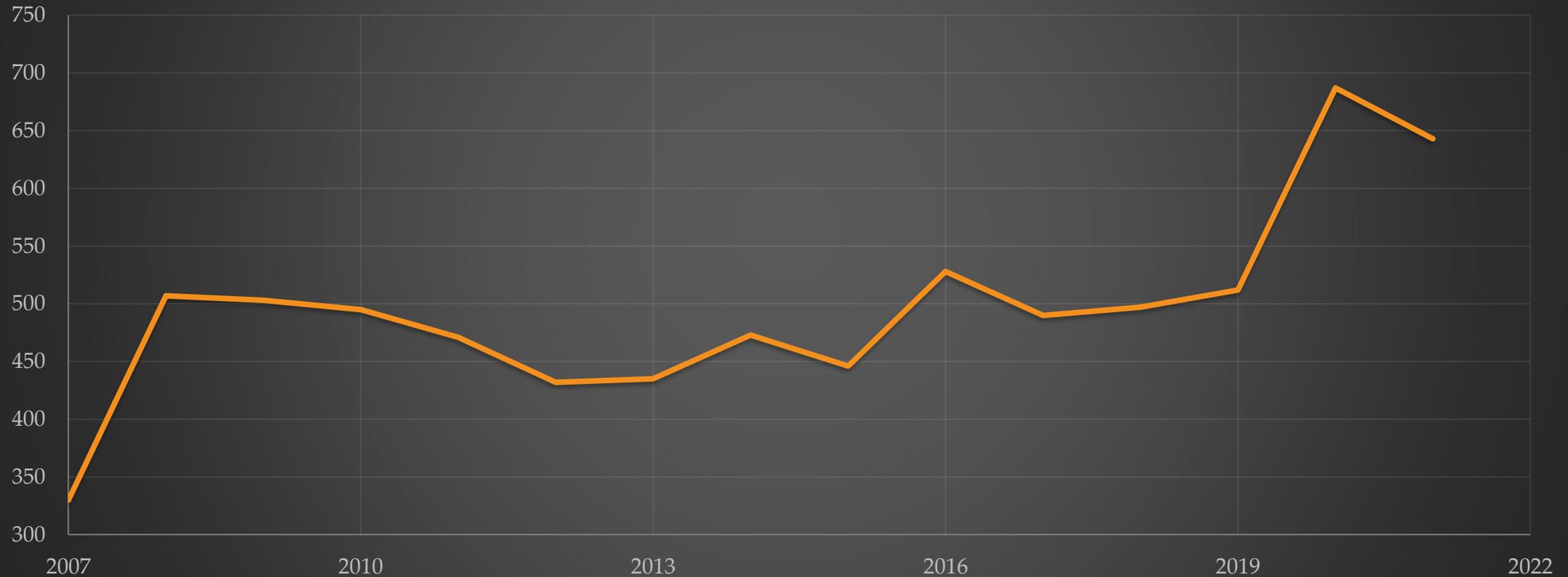
Existing Program Elements	Possible Program Elements
Continuing education for Licensed Designers	Installation of composting toilets in existing SFRs
Sewer line requirements from tank to leachfield	Tiny Houses
Sieve-size requirements for mound sand and testing frequency	Energy efficiency for wastewater systems
Non-soil-based systems and water conservation measures for a reduction in leachfield size	Establishing inspections for systems within buffer zones of potable surface water
Greywater system sizing and science	Designing for climate change
Force main pressure/leak testing	Tracking reasons for failed systems
Boundary Line Adjustments	Adding an occupancy limit to wastewater permits
ANR's Permit Navigator oncoming requirement	
Financing failed systems for low-income residents	

Graph of Table B-1: Compliance with Performance Standards

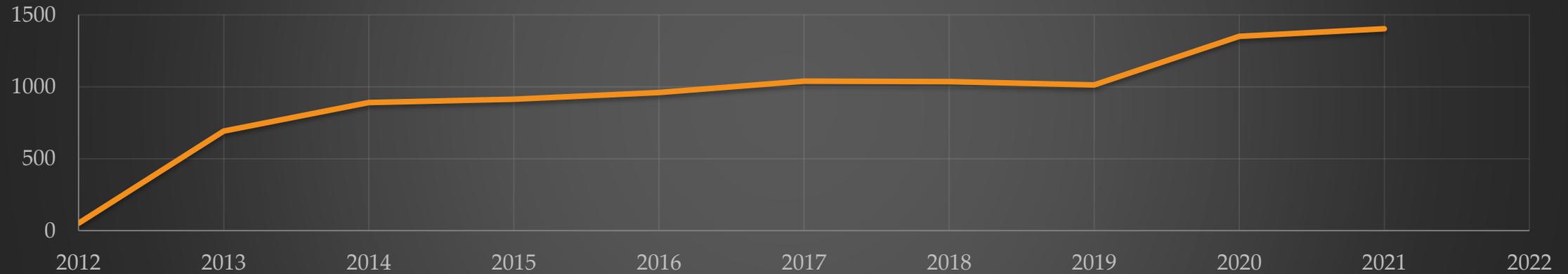
—●— # of Permits Issued —▲— # of Permits Meeting PEP Standards



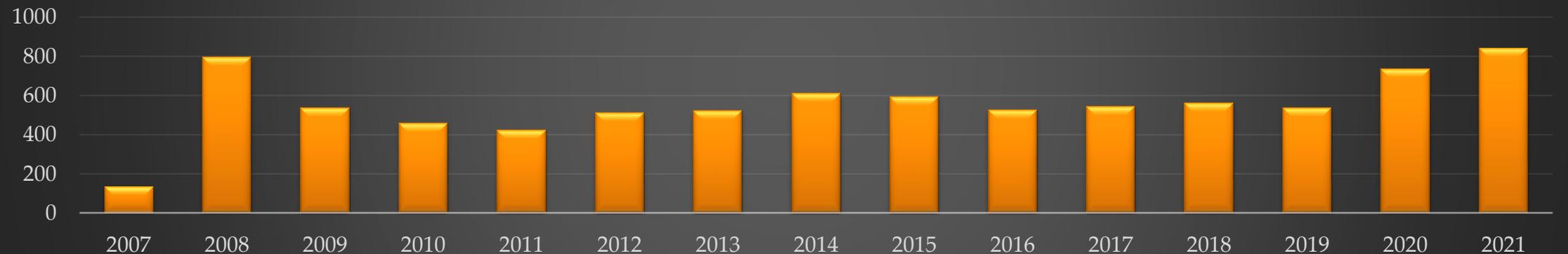
Graph of Table B-2: Applications Submitted to Repair Failed Wastewater Systems



Innovative/Alternative Reports Received from 2012 to 2021



Overall Number of Innovative/Alternative Systems Permitted from 2007 to 2021: 8,336 Total





“The U.S. Bureau of the Census reports that the distribution and density of septic systems vary widely by region and state, from a high of about 55 percent in Vermont...” –USEPA (www.epa.gov/septic/septic-systems-overview)

Questions?

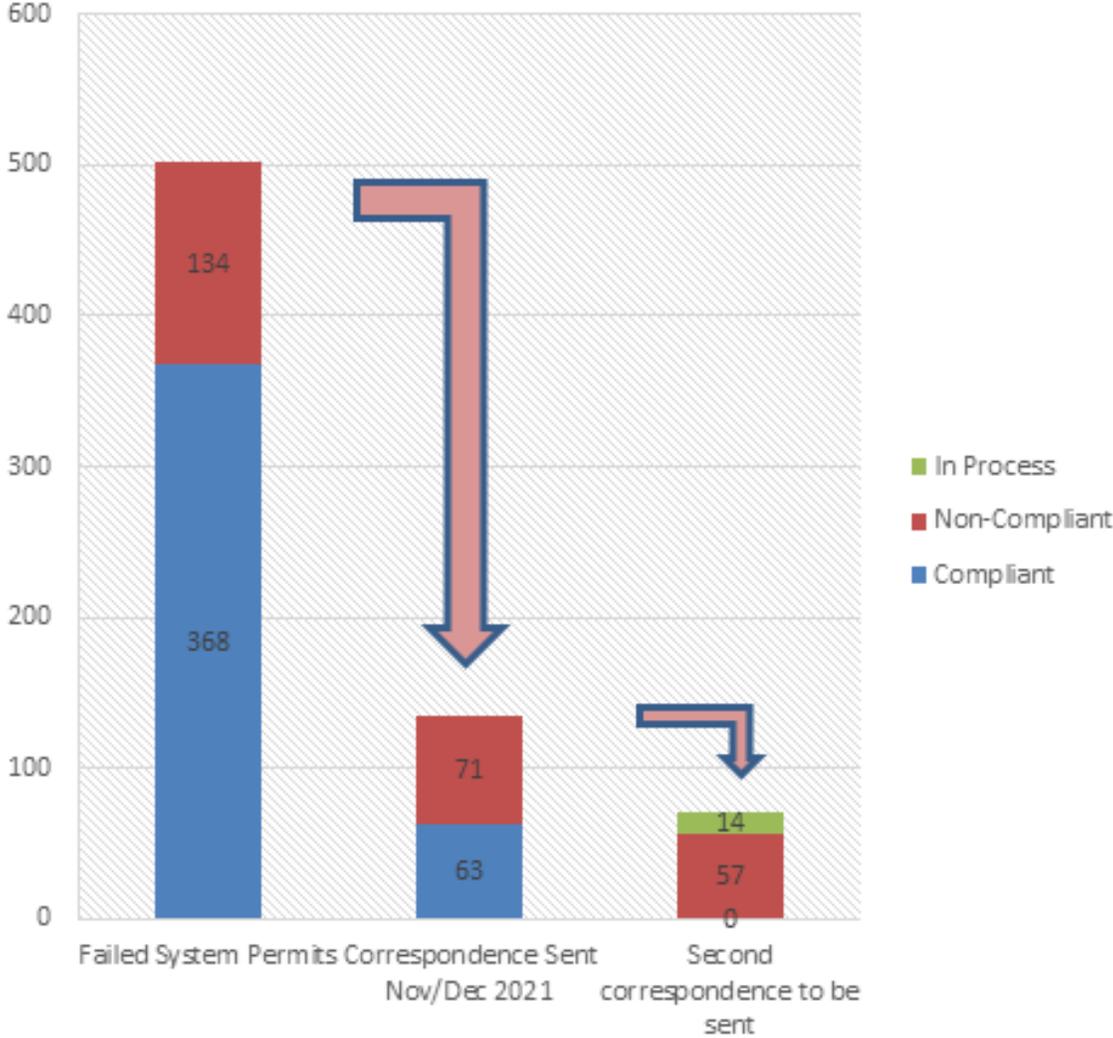
Composition of 2022 TAC

- 1+ Professional Engineer
- 1+ Site Technician/Licensed Designer
- 1+ Well Driller
- 1+ Hydrogeologist
- 1+ Delegated Municipality
- 1+ Water Quality Specialist
- 1+ Technical Staff of the Agency of Natural resources
- 1+ Technical Staff of the Department of Health
- **Karen Adams**, Technical Services Manager (Colchester)
- **Cristin Ashmankas**, Hydrogeologist & Sedimentologist, DWGPD
- **Mark Bannon P.E.**, Licensed Designer, AICP
- **Ernest Christianson**, Retired Regional Office Programs Manager
- **Bruce Douglas P.E.**, Onsite Wastewater Programs Manager, DWGPD
- **Jenneth Fleckenstein**, Water Quality Specialist
- **Anna Gallagher**, Env. Health Engineer, Department of Health
- **Bryan Harrington**, ID & UIC Programs Supervisor, DWGPD
- **Craig Heindel CPG**, Senior Hydrogeologist, Licensed Designer
- **Craig Jewett P.E.**, Licensed Designer
- **Mike Jordan**, Licensed Well Driller
- **Sille Larson**, Engineering and Water Resources Section Supervisor, DWGPD
- **Gunner McCain**, Former Licensed Designer
- **Stephen Revell CPG**, Licensed Designer, Hydrogeologist
- **Scott Stewart**, Hydrogeologist, DWGPD
- **Roger Thompson**, Licensed Designer
- **Ken White**, Licensed Well Driller
- **Justin Willis**, Licensed Designer
- **Sheri Young CPSS**, Licensed Designer, Soil Scientist

Low Income Loan Program and the Future with ARPA

- During calendar year 2021, the Onsite Loan Program made five loan awards for a total of \$132,725 in new loan commitments (with three other loans under review when the year closed). Two of the five loans were for replacement of failed water systems; the other three loans were for replacement of failed wastewater systems.
- ARPA Funding
 - Manufactured Housing Community Solutions
 - Healthy Homes Initiative
 - Village Drinking and Wastewater
 - Pretreatment for High Strength Waste from small industries

Installation Certifications for Failed Wastewater Systems Due in 2021



Number of Attendees at DEC Sponsored Trainings for Licensed Designers from 2010 to 2021



Total Number of Courses Endorsed for Licensed Designer Continuing Education Credit from 2016 to 2021

