

# Annual Report

## Fiscal Year 2019-20



Jim Justice, Governor

Austin Caperton, Cabinet Secretary

# Protecting, Restoring and Supporting Roles in Promoting a Healthy Environment

The West Virginia Department of Environmental Protection's mission is to promote a healthy environment. To do this, the agency must protect the environment while leaving room for a sustainable industry base. Such a task requires careful balance. Its major divisions – protecting air, land, and water – must be circumspect and fair in regulating industry, permitting extraction of natural resources and protecting the public from potential pollution hazards.



west virginia department of environmental protection



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## Division of Air Quality

The Division of Air Quality (DAQ) develops and implements regulations and related programs mandated by the federal Clean Air Act (CAA) and the state Air Pollution Control Act. It works for the protection of public health and the prevention or mitigation of environmental impacts resulting from air pollutant emissions. DAQ monitors air quality and regulates emissions of air pollutants from industrial and commercial facilities.

### During FY20, DAQ accomplished:

#### Air Monitoring

- Operated 18 air monitoring sites across the state, including two air toxic sites, two fine particulate matter speciation sites, a multipollutant NCore site, and a radiation network monitor, on behalf of EPA's National Radiation Monitoring Program.
- Collected and processed more than 2,000 PM<sub>2.5</sub> (particulate matter less than 2.5 micrometers in diameter) and PM<sub>10</sub> (particulate matter less than 10 micrometers in diameter) filter samples.
- Received \$446,716 grant from the U.S. Environmental Protection Agency, which partially funded fine particulate matter (PM) monitoring, laboratory, and data handling activities.
- Performed nearly 500 air toxics particulate metals analyses for sites in West Virginia, as well as for the National Air Toxics Trends Site in Washington, D.C., and sites in Philadelphia and Pittsburgh, Pa., and Delaware.
- Received \$23,000 grant from EPA to partially support operation of an Inductively Coupled Plasma Mass Spectrometer (ICP-MS) to conduct air toxics analysis of particulate samples.

#### Education & Outreach

- From July 2019 to March 2020, the DAQ Outreach Team participated in 18 events across eight counties in West Virginia where staff spoke with over 3,200 visitors. Due to COVID-19, all Outreach events from mid-March on were cancelled.
- In support of at-home environmental education during these unprecedented times and at the request of the Huntington East Middle School "Team Grizzly" Science Team, the Outreach Team developed five educational videos in April. The videos are available on DEP's YouTube channel.

## Compliance and Enforcement

- Conducted 485 full compliance inspections of air pollution sources, 86 of which were major sources of air pollution and 54 were synthetic minors.
- Conducted 249 partial evaluations and 92 optical gas imaging inspections of air pollution sources.
- Reviewed 870 self-monitoring reports from air pollution sources.
- Investigated 594 citizen complaints.
- Inspected 46 asbestos demolition/renovation projects.
- Reviewed 367 stack test reports, relative accuracy test audits and opacity tests.
- Reviewed and approved 383 stack, relative accuracy audit, and opacity test protocols.
- Observed 53 stack and relative accuracy audit tests.
- Received and reviewed 185 Title V annual certification reports.
- Issued 38 notices of violation.
- Negotiated 15 consent orders to settle violations.
- Collected \$545,625 as a result of the consent orders.

## Hazardous and Solid Waste Air Program (HSWAP)

- Conducted 35 compliance site inspections at hazardous waste air pollution sources.
- Conducted five used and waste oil burner source inspections.
- Assisted in the development/update of the 2019-20 DAQ air rules 45CSR (code of state rules) 18, 45CSR25 and 45CSR34.
- Submitted to EPA the required grant reports on the Resource Conservation and Recovery Act (RCRA) and the CAA 111(d)/129 programs.
- Assisted the Division of Water and Waste Management on revisions to the West Virginia RCRA Hazardous Waste State Authorization Program for combustion, thermal treatment, and subparts AA, BB, and CC.
- Worked on ongoing CAA 111(d)/129 plan revisions for commercial industrial solid waste incinerators for EPA approval.
- Worked on rule changes to 45CSR23 for Municipal Solid Waste Landfills and assisted with the submittal of a corresponding State Plan.
- Assisted in the review of 75 stack test reviews.



## Permitting

### Title V Program

- Issued 54 permit revisions, including seven administrative amendments, and 43 minor and four significant modifications.
- Issued 20 renewal permits.
- Issued nine initial permits.

### New Source Review Program

- Issued 74 Rule 13 construction/modification permits.
- Issued three temporary permits.
- Issued two relocation permits.
- Issued 87 administrative updates to existing permits.
- Issued 140 general permit registrations and reviewed 228 Alternative Operating Scenarios and 228 Annual Certifications.
- Rendered 73 decisions on permit determinations.
- Completed five withdrawal requests.
- Held one public meeting.

## Planning

- In August 2019, a redesignation request from nonattainment to attainment for the Brooke County 2010 SO<sub>2</sub> 1-hour National Ambient Air Quality Standard (NAAQS) was submitted to the EPA for its review and approval. On March 20, 2020, the EPA proposed approving the area as attainment.
- A redesignation request from nonattainment to attainment for the Marshall County 2010 SO<sub>2</sub> 1-hour NAAQS was submitted to the EPA for its review and approval in March 2020.
- A court ruling required the EPA to revoke the 1997 Ozone NAAQS. As a result, the DAQ was required to prepare and submit the second 10-year ozone maintenance plans for five areas in West Virginia. The five Maintenance Plans were submitted to the EPA for its review and approval in December 2019.
- Reviewed, replicated and/or approved air dispersion modeling to assess impacts for five facilities, reviewed and responded to public modeling comments for a facility in Jefferson County, and began compiling meteorological and modeling input data for an emerging pollutant.
- Collected emission inventory data for calendar year 2019 from 166 major Title V facilities and quality assured the data for the FY2021 annual fee collection program.
- Finalized five legislative rules that were approved during the 2020 Legislative Session.
- Proposed seven legislative rules for the 2021 Legislative Session, which included the new Affordable Clean Energy (ACE) Rule 44.
- Work began on developing a partial State ACE Plan, which must be submitted to the EPA for its approval during FY2021.

## Small Business Assistance Program (SBAP)

- Provided assistance to 196 small businesses (92 in depth, with 32 site visits).



## Division of Mining & Reclamation

The Division of Mining and Reclamation (DMR) safeguards the environment during coal mining. It ensures prompt compliance and proper reclamation of mining sites and maintains a statewide database for mining operations.

### During FY20, DMR accomplished:

#### Article 3 – Coal Mining

- Received 18 applications for new mining permits.
- Approved 26 applications for new mining permits, for a total of 4,531 acres:
  - 16 surface permits, for 4,085 acres.
  - 6 underground permits, for 58 acres.
  - 4 other type permits, for 388 acres.
- Approved 8 permit amendments, for 549 acres.
- Approved 53 notices of intent to prospect.
- Approved 182 permit renewals.
- Approved 183 incidental boundary permit revisions, for 1,598 acres.
- Approved 299 permit revisions.
- Approved 20 incremental bonding applications.
- Approved 32 operator assignments.
- Approved 91 permit transfers.
- Approved 11 dam certificates.
- Approved 73 emergency warning plans.
- Processed 177 withdraws, denials or terminations of applications.

#### Article 4 – Minerals other than Coal

- Approved 3 applications for new quarry permits.
- Approved 15 applications for quarry modifications.
- Approved 55 quarry annual bonding applications.

#### Article 11 – NPDES related to mining

- Approved 26 applications for new NPDES permits.
- Approved 175 permit reissuances.
- Approved 576 permit modifications.
- Approved 47 permit transfers.
- Processed 4,496 electronic discharge monitoring reports (eDMRs).
- Processed 77 withdraws, denial or terminations of applications.

## Inspection & Enforcement

- Conducted 23,500 inspections (18,578 Art. 3 and 4,922 Art. 11)
- Met mine inspection frequency 99.6 percent of the time.
- Approved seven permits for Phase 1 release, for a total of 591 acres
- Approved 7 permits for Phase 2 release for a total of 743 acres.
- Approved 37 permits for Phase 3 (final) release for a total of 2,989 acres released back to landowners.
- Approved 36 incremental Phase 1 releases.
- Approved 26 incremental Phase 2 releases.
- Approved 57 incremental Phase 3 releases.
- Approved 54 Prospect releases.
- Approved four Planting Plan releases.
- Approved 96 inactive status requests.
- Issued 1,419 notices of violations (1,088 Art. 3 and 331 Art. 11)
- Issued 427 cessation orders.
- Issued 4 consent orders
- Processed 3,378 electronic certifications (eCerts).
- Processed 1212 pre-subsidence surveys.
- Responded to Citizen Complaints within 48 hours 97 percent of the time.
- Investigated 450 complaints.
- Held 89 assessment conferences.
- Revoked nine permits.

## Blasting & Explosives

- Accepted 125 Pre-Blast Surveys
- Renewed 6 surveyors.
- Received and processed 13 blasting damage claims.
- Received 47 blasting complaints not alleging damage.
- Gave 89 blasting exams.
- Approved 21 initial blasters.
- Approved 34 blaster renewals.
- Approved 1 reciprocity blaster.



## Division of Water and Waste Management

The Division of Water and Waste Management (DWWM) strives to meet its mission through implementation of programs controlling surface and groundwater pollution caused by industrial and municipal discharges, as well as oversight of construction, operation, and closure of hazardous, solid waste, aboveground and underground storage tank sites.

In addition, the division works to protect, restore, and enhance West Virginia's watersheds through comprehensive watershed assessments, groundwater monitoring, wetlands preservation, inspection and enforcement of hazardous and solid waste disposal, and proper operation of storage tanks.

**During FY20, DWWM accomplished:**

### Environmental Enforcement

#### Dam Safety

- Reviewed 9 applications or proposals for dam construction, modification, or removal; reviewed 179 monitoring and emergency action plans; conducted 304 inspections of all types. Oversaw the removal or breach of 2 dams and remediation to meet Dam Safety standards on 2 others.

#### Hazardous Waste

- Completed 451 inspections related to hazardous waste facilities; responded to 13 emergency response situations; investigated 24 citizen complaints related to hazardous materials.

#### Underground Storage Tanks

- Conducted 36 closure inspections, 3 installation inspections, and 437 compliance monitoring inspections; investigated 11 citizen complaints.

#### Water and Waste

- Conducted 2,614 inspections of solid waste and water pollution control facilities; initiated 55 open dump cleanups; responded to 1,762 citizen complaints

#### Aboveground Storage Tanks

- Conducted 1,158 compliance monitoring inspections and investigated 7 citizen complaints.

#### Leaking Aboveground/Underground Storage Tanks

- Investigation and cleanup of 58 new LAST/LUST sites and completed investigations and closed the active files on 99 LAST/LUST sites.



## Watershed Improvement Branch

- Awarded 20 grants, totaling \$1,539,174 to partner agencies, local governments, watershed associations, nonprofit organizations, and universities to implement watershed-related outreach, planning, education, monitoring, and water quality improvement projects. The funding is provided by the EPA through Section 319 Nonpoint Source and Chesapeake Bay Programs, and DEP.
- Awarded 21 grants, totaling \$98,556 through the West Virginia Stream Partners Program.
- Expended \$5,639,905 toward 18 In Lieu Fee stream and wetland mitigation projects for site protection, assessment, design, permitting, monitoring, maintenance, and mitigation bank credit purchase.
- Through the WV Save Our Streams (SOS) Program, coordinated 6 streamside workshops for 130 individuals, participated in 12 outreach events for over 2000 people, and participated in 4 stream clean ups. Through Project WET (Water Education for Teachers), held workshops on WET Educator (124 trained), Getting Little Feet WET (74 trained), WOW – The Wonders of Wetlands workshops (19 trained), and Sampler (four trained). More than 20 on site and virtual educational outreach events were attended or co-hosted, including the Inaugural Wild and Wonderful Water Science Fair and Rain Barrel in Schools Program. Our efforts reached more than 1,900 students with water education. Conducted nine Water Festivals reaching more than 2,000 students across the state.

## Permitting

- Issued 16 major and 84 minor individual permits.
- Issued 56 permit modifications to industrial and municipal facilities.
- Issued 1,293 registrations (329 general permit registrations and 964 stormwater), and 175 modifications (59 general registration and 116 stormwater) for a variety of facilities and activities.

## Groundwater/UIC Program

- Issued 6 underground injection control permits, two modifications, transferred 4 permits and inspected 220 underground injection control facilities.
- Reviewed and approved 603 Groundwater Protection Plans and 675 Monitoring Well reports.
- Certified 201 Monitoring Well Drillers.
- Worked on 19 remediation projects.

## Hazardous Waste Operating Permits

- Issued 1 Hazardous Waste Resource Conservation Recovery Act permit.

## Solid Waste

- Issued 33 permits (8 municipal solid waste landfill and transfer station permits, 2 municipal solid waste landfill major permit modifications, 3 Class F Industrial Solid Waste Permits and 20 Class D Construction/Demolition Landfill registrations).
- Issued 627 minor permit modifications.

## Clean Water State Revolving Fund

- Disbursed more than \$74.8 million to communities for municipal sewer projects under construction; disbursed \$278,141 to the onsite system loan program; closed new loans on an additional 15 municipal construction projects, worth \$71.8 million; and have already issued 14 preliminary binding commitment letters and/or loan agreements for additional projects, worth \$55.5 million.
- Approved 16 sets of plans and specifications; reviewed 18 Infrastructure and Jobs Development Council applications; and funded 27 new onsite systems through the Onsite Systems Loan Program.

## Quality Assurance

- Received applications from 91 laboratories for certification; performed onsite inspections at 69 laboratories; and recertified/certified 88 laboratories.





## Watershed Assessment Branch (TMDL)

- **Total Maximum Daily Load Development:** Collected 2,917\* water quality samples from 703 sites on 536 streams, providing 50,122 individual parameter results. These samples are primarily from the Tug Fork River and Little Kanawha River watersheds where pre-TMDL development monitoring was focused.
- The Draft TMDL for the Upper Guyandotte River Watershed was released to public on June 18, Due to travel and in-person meeting restriction in response to the coronavirus pandemic, a virtual public meeting was held June 30, to answer questions about the TMDL project. Draft TMDLs for Twelvepole Creek, Big Sandy River, and Lower Ohio River watersheds were completed but held from public release until Upper Guyandotte is finalized. TMDL development is well underway in the Lower Guyandotte River Watershed and has begun in the Tug River Watershed.
- **Watershed Assessment/Long-term Monitoring Sites:** collected water quality, habitat, and biological information from 54 targeted sites; 72 samples from Long-term Monitoring Sites; 330 General Water Quality samples; 162 samples for filamentous algae surveys; and 31 samples related to other Harmful Algae Blooms (HABS).
- **Ambient Water Quality Monitoring Network:** collected bi-monthly water quality information for more than 30 parameters from 26 sites on the State's major streams and rivers, six sites in the Monongahela basin were sampled monthly during low-flow season.
- **Probabilistic Monitoring** for 4th 5-year cycle (final 10 sites) was completed in 2019. Monitoring for 5th 5-year cycle began in 2019.
- **Water quality continuous data loggers** were deployed at 67 sites on 58 streams.
- **Fish community data** was collected at more than 22 sites. Sites were primarily collected outside of TMDL development areas to enhance data available for regional fish IBI development.
- **Benthic Macroinvertebrate Data:** 442 samples from 295 streams were collected in calendar year 2019.
- **Lakes:** In 2019, monitored sites at 6 lakes and collected 54 samples, with 5,925 individual parameter results including field parameters that were measured along depth profiles at each site visit.

\* This number, as with the other numbers in this section, is derived from WABBASE, our primary database. Because of delays in getting data entered into the database, data collected from the end of state fiscal year 2020 was not available at the time this report was being developed. In order to get a full year's worth of data the results in this section are from calendar year 2019.

## Water Quality Standards

- Attended Legislative committee meetings and held two public meetings to provide information
- and obtain input from citizens, groups and legislators regarding Human Health Criteria revisions.
- Started and began meeting monthly with the Human Health Criteria Workgroup, comprised of members from the WV Environmental Protection Advisory Council and DEP staff. This group was formed to evaluate the state's human health criteria to make a recommendation for additional criteria updates.
- Received public comment regarding proposed rule revisions and held a public hearing to obtain input on proposed rule revisions.
- Continued to work with EPA on approval of West Virginia's Aluminum aquatic life criteria.
- Worked with EPA on developing a framework for a Use Attainability Analysis to establish a limited aquatic life use for streams.
- Attended Association for Clean Water Administrators (ACWA) annual meeting (virtually), and participated on its WQS Variance Working Group, Monitoring Standards & Assessment Committee, and PFAS Subcommittee.
- Spoke at conferences and meetings, regarding DEP and the Water Quality Standards program, including WVU Engineering lecture each semester and WV Brownfields annual meeting.
- Continued to monitor filamentous algae and nutrients in the Greenbrier River. Continued to observe decreases in the amount of phosphorus and subsequent decrease in filamentous algae coverage for the second consecutive year as compared to previous years.



## 401 Certification Program

- Reviewed 379 Nationwide 404 permits, of which 184 were for Division of Highways projects.
- Issued 14 individual 401 Water Quality Certifications and one modification.
- Reviewed and approved 11 Nationwide 27 Permit Stream Restoration Plans.
- Reviewed and approved 31 Nationwide 39 Permits for Commercial and Institutional Developments.
- Reviewed and approved 62 DOH Regional Permit projects.
- Reviewed and approved 63 Stream Management Plans from the WV Conservation Agency under their Regional General Permit.
- Reviewed and approved four Army Corps of Engineers' issued Letters of Permission.
- Coordinated with the Environmental Protection Agency on four Environmental Enforcement cases.
- Review various Mitigation Bank documents, including prospectus, instrument, mitigation plans, monitoring plans, and modifications.
- Received and reviewed various documents on hydro-electric power projects, in accordance with FERC licensing requirements.
- Developed a 401 WQC Programmatic Agreement with the United State Army Corps of Engineers.

## Water Use Section

The Water Use Section was established under the authority of the Water Resources Protection and Management Act (W.Va. Code §22-26). The Section published the State Water Resources Management Plan, which provides a comprehensive review of the state's waters and was adopted by the Legislature in 2014. The Water Use Section has continued to implement the provisions and recommendations of both the Act and Plan with several ongoing programs, projects, and studies relevant to the state's water resources.

## Large Quantity Users (LQU) Survey

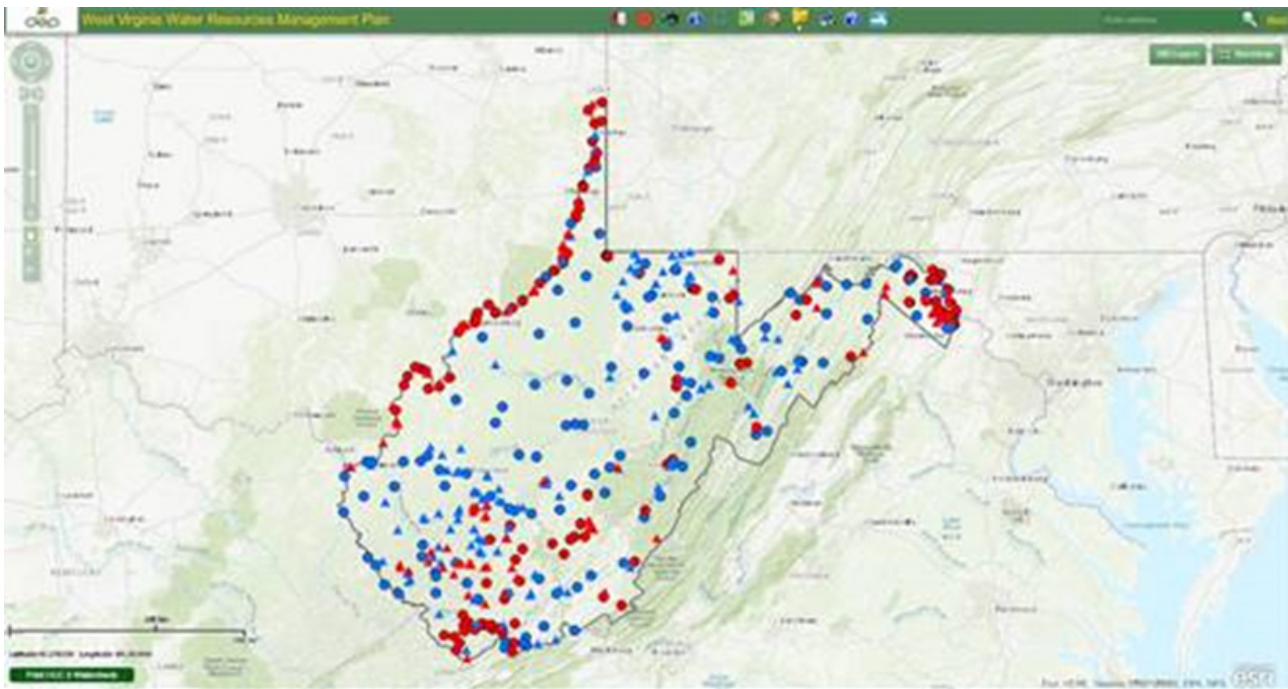
Any entity that withdraws more than 300,000 gallons in 30 days from state water resources is considered a Large Quantity User (LQU) under the Water Resources Protection and Management Act. These LQUs use the DEP Electronic Submission System to report their withdrawals annually to the Water Use Section. The Section has been collecting LQU information since 2006 and monitoring trends in water use. We share water withdrawal information with the State Legislature and research partners including universities and the U.S. Geological Survey.

Large Quantity Users continue to withdraw water from 725 individual sites. Groundwater withdrawals remain relatively consistent, comprising approximately 5% of the total water use in West Virginia. The public water supply is the single largest user of groundwater (contributing 20% of all PWS withdrawals), followed by the chemical and industrial sectors. Groundwater use is concentrated in the alluvial aquifers along the Ohio River, southern coalfields, and karst aquifer systems of eastern WV.

## Water Management Plans for Horizontal Well Work Permits

During Fiscal Year 2020, the Water Use Program continued to provide water management plans to support West Virginia's oil and gas industry, as required by The Horizontal Well Control Act (W.Va. Code §22-6A).

TAGIS and the Water Use Section also maintain a Water Withdrawal Guidance Tool. Developed in 2009, this tool helps direct potential water withdrawals towards only those surface waters with sufficient flow. The Section is currently investigating improvements to this tool, including the incorporation of groundwater resources, stream ecology, and higher spatial resolutions. Link: <https://tagis.dep.wv.gov/wwts/>





## Restoring the Environment

### Division of Land Restoration

The Division of Land Restoration's (DLR) mission is to reclaim and remediate contaminated and disturbed land to a condition protective of public health and safety and suitable for productive reuse and economic development.

### Office of Environmental Remediation

Through its various environmental cleanup programs outlined below, the Office of Environmental Remediation (OER) provides for clean, safe, and productive West Virginia communities by assessing and remediating environmental resources and restoring contaminated properties to beneficial use.

#### **During FY20, OER accomplished:**

### Brownfields Assistance Program

The Brownfields Assistance Program empowers communities, developers, and stakeholders to assess, cleanup, and sustainably reuse brownfields. During FY20, the program accomplished:

- Created and distributed citizens' guides and handouts which provide an easy understanding of the brownfield assessment and remediation process.
- Provided free guidance and technical assistance to various stakeholders to assist with the assessment, cleanup, and redevelopment of brownfields. Specific services included reviewing and explaining environmental reports; providing technical and program guidance to assess and remediate sites; educating stakeholders and conducting community outreach, including participation in a grant-writing workshop; and identifying potential funding sources for assessment and remediation.
- Presented at the West Virginia Brownfields Conference and the Central Appalachian Regional Brownfields Summit to provide education and conduct public outreach regarding the Brownfields Assistance Program.
- Launched the Brownfields Revolving Fund to provide low interest loans for brownfield cleanup projects. Loans are available to eligible local government entities, nonprofits, and private sector businesses.
- Administered environmental site assessments at five brownfield properties to determine presence and levels of contamination and ultimately return the properties back to productive use.

### UECA-LUST Program

The Uniform Environmental Covenants Act–Leaking Underground Storage Tank (UECA-LUST) Program is an alternative remediation option for releases from underground storage tanks (USTs). Through the UECA-LUST Program, responsible parties may remediate LUST sites to risk-based standards utilizing engineering and institutional controls, such as covers, caps, and land use restrictions, in accordance with the Uniform Environmental Covenants Act. During FY20, the program:

- Accepted 5 LUST sites to participate in the program.
- Issued 1 “No Further Action” letters to sites which successfully completed risk-based remediation.
- Developed and launched a new tiered closure system to more efficiently close UECA-LUST sites that satisfy certain criteria via one of three (3) closure pathways, depending on level of contamination in specific media. The tiered closure system is a more streamlined, yet more flexible, approach to achieve site closure.

### Voluntary Remediation Program

The Voluntary Remediation Program encourages voluntary cleanup and redevelopment of abandoned or under-utilized contaminated properties by providing certain environmental liability protections under West Virginia law to parties completing remediation under WVDEP oversight. During FY20, the program accomplished:

- Accepted 12 new applications for voluntary remediation projects. These sites are located in Cabell, Fayette, Hancock, Jefferson, Kanawha, Logan, Mercer, Preston, Raleigh, Taylor, and Tucker counties.
- Issued 16 Certificates of Completion for 810.17 remediated acres of land ready for reuse. Cumulatively, 214 Certificates of Completion have been issued for 3,465.87 remediated acres of land. Sites receiving a Certificate of Completion include the Beech Bottom Industrial Park in Beech Bottom, a 600-acre riverfront property that recently attracted a \$12 million investment from tenant Jupiter Aluminum; the Heritage Holdings site in Wellsburg, home to operations for the expanding Eagle Manufacturing Company for over 125 years; and the Barkers Creek Industrial Park in Bud, a new 11-acre ready-to-build property that has already attracted its first tenant.



## Superfund Program

The WVDEP is a support regulatory agency for the U.S. EPA at removal, pre-remedial, and remedial sites subject to the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA), which requires meaningful state participation. The WVDEP Superfund Program represents state interests; ensures compliance with applicable state laws and regulations; provides oversight of data and data collection activities; and acts as a liaison between the U.S. EPA and the citizens of West Virginia, local officials, community representatives, and other stakeholders. During FY20, the program:

- Supported EPA/led O&M efforts at 10 National Priorities List sites:
  - Allegheny Ballistics Laboratory (Rocket Center)
  - Ravenswood PCE
  - Big John Salvage—Hoult Road (Fairmont)
  - Sharon Steel Corp (Fairmont)
  - West Virginia Ordnance (Point Pleasant)
  - Shaffer Equipment (Minden)
  - Hanlin-Allied-Olin (Moundsville)
  - Vienna Tetrachloroethene
  - North 25th Street Glass and Zinc (Clarksburg)
  - Fike Chemical, Inc. (Nitro)
- Assisted EPA with removal assessments/actions at 8 sites:
  - Coyne Textile (Huntington)
  - Paden City PCE Site
  - Kanawha River Dioxin Site (Nitro)
  - Route two PCE Site (Weirton)
  - Kincaid Lumber (Kincaid)
  - Lin Electric (Bluefield)
  - W&G Electroplating Project (Boothsville)
  - Braxton Industries (Ireland)
- Led or supported pre-remedial assessments for EPA at 14 sites:
  - AES-Monsanto (Nitro)
  - Anchor Hocking (Clarksburg)
  - Elkem Metals (Alloy)
  - Halltown Paper
  - Barker Junk (Mabscott)
  - Don's Disposal (Charleston)
  - Dalzell Viking (New Martinsville)
  - Fleming Landfill (Charleston)
  - Sloan Glass (Culloden)
  - Glen Dale TCE Site
  - St. Albans Trailer Park
  - White Park (Morgantown)
  - New Cumberland Landfill
  - Reedsville Scattered Foundry Waste
- Led monitoring efforts at 1 release site:
  - TDI Spill (Proctor)

## Long-Term Monitoring of Institutional Controls

Institutional controls are administrative and legal controls, such as restrictive covenants or city ordinances, that minimize the potential for human exposure or contamination and protect the integrity of the cleanup. The WVDEP generally utilizes Land Use Covenants (LUCs)—also referred to as environmental covenants—as institutional controls on sites where removal and treatment of all contamination is not possible or practical. The agency continuously monitors and regularly inspects properties with recorded LUCs to protect citizens from coming in contact with contamination at a site. During FY20, the program accomplished:

- Received and processed 1,202 notifications of excavation from WV811 to monitor sites with established environmental controls that contain activity and use limitations and/or engineering controls.

## Federal Facilities Restoration Program

The WVDEP serves as the lead regulatory agency at Department of Defense (DOD) restoration sites not on the Superfund NPL. The Federal Facilities Restoration Program oversees the investigation and cleanup of active, closing, and formerly used military installations at which hazardous substances and/or petroleum products were used, stored, or disposed of during past operations, as well as military munitions response sites known or suspected to contain unexploded ordnance, discarded military munitions, or munitions constituents.

In addition to investigating and remediating other contamination, DOD has launched an initiative to review and investigate sites for an emerging class of contaminants, per- and polyfluoroalkyl substances (PFAS). DOD's use of PFAS started in the 1970s, with the introduction of aqueous film forming foam (AFFF) for fuel firefighting purposes. AFFF contains PFAS and may contain perfluorooctane sulfonate (PFOS) and, in some formulations, perfluorooctanoic acid (PFOA), two chemicals of the larger class of PFAS. Today, the primary concern is the impact that PFAS may have on drinking water on or near one of these sites. The WVDEP's Federal Facilities Restoration Program assists with these reviews and investigations.

During FY20, the program accomplished:

- Collaborated with the U.S. Air Force, U.S. Army, U.S. Army Corps of Engineers, U.S. Army National Guard, and U.S. Navy to actively assess and remediate 11 Formerly Use Defense Sites (FUDS), Installation Restoration (IR) sites, Military Munitions Response Program (MMRP) sites, and Non-DOD Owned, Non-Operational Defense Sites (NDNODS):
  - a. Allegheny Ballistics Laboratory (IR – NPL) in Rocket Center
  - b. Army Aviation Support Facility #1 (IR) in Williamstown\*
  - c. Army Aviation Support Facility #2 (IR) in Wheeling\*
  - d. Camp Dawson Army Training Site (IR) in Kingwood\*
  - e. Fixed Wing Army Aviation Training Site (IR) in Bridgeport\*
  - f. Parkersburg Range (NDNODS) in Parkersburg
  - g. Shepherd Field Air National Guard Base (IR) in Martinsburg\*
  - h. Sugar Grove Operations Area (IR) in Sugar Grove\*
  - i. Yeager Field Air National Guard Base (IR) in Charleston\*
  - j. WV Maneuver Area (MMRP) across Eastern Panhandle
  - k. West Virginia Ordnance (FUDS – NPL) in Point Pleasant

\*Denotes PFAS investigation site.



## Office of Special Reclamation

DLR's Office of Special Reclamation (OSR) eliminates abandoned mine hazards due to post-1977 mining operations. This may entail anything from minor to major land restoration and to perpetual water treatment. Its reclamation funds come from coal taxes, civil penalties and bond forfeitures.

### During FY20, the OSR accomplished:

- Provided quarterly progress reports to the Special Reclamation Fund Advisory Council.
- Monitored water quality on 38 permits for acid mine drainage determination (AMD) and design purposes.
- Performed 3,624 land and water inspections and 1,104 construction inspections.
- Issued 8 water reclamation purchase orders, totaling approximately \$7 million.
- Had five permits in the retrofit reclamation process and completed two retrofit projects that will allow OSR to meet more stringent discharge limits.
- Completed land reclamation on 5 permits (approx. 92 acres).
- Completed design of 3 projects using outside consulting firms (continued work on one).
- Continued cost-share partnership with Southwestern Energy (SWN). As part of the Muddy Creek Watershed Restoration Project, SWN continues to contribute \$375,000 toward operation and maintenance costs for water treatment.
- Continued the partnership with the Land Stewardship Corp., for the management of design, and construction, of 7 OSR projects.
- OSR now has five licensed drone pilots. OSR uses drones for aerial mapping and photography. The infrared mapping will be used to detect ground water discharges, mine seeps, subsurface cracks, and coal seam fires. Additionally, a hydro drone (boat), which uses sonar, is used in determining pond depths. This information is used for reclamation purposes.
- Collaborated with WVU's Water Research Institute (WRI) to conduct a trial for Rare Earth Element extraction (REE) at an OSR acid mine drainage (AMD) treatment site in Monongalia County. REEs were extracted from the sludge that is generated during the treatment of AMD. REEs are a valuable resource that are essential for advanced technologies such as smart phones and robots to classified national defense systems. The United States currently imports almost all of its REE from China.
- Began working with WRI on the design of a full-scale REE extraction project that will be incorporated into the designs of an OSR AMD treatment facility near Mount Storm. Construction is expected to begin in the Fall of 2020.

## Abandoned Mine Lands

DLR's Office of Abandoned Mine Lands and Restoration (AML) mends damage that occurred from mining operations prior to Aug. 3, 1977. Abandoned mines impose social and economic costs to residents and impair environmental quality. AML restores land and improves water quality at abandoned or forfeited sites using funding from federal coal taxes.

### During FY20, AML accomplished:

PLANNING	
AMD Water Treatment	205.032 gallons per minute
Clogged Streams	1.35 miles
Dangerous Highwalls	300 feet
Dangerous Impoundments/Portals	76
Dangerous Piles and Embankments	22.1 acres
Subsidence	2 acres
Dangerous Slides	7.35 acres
Polluted Water	425 Service Hookups
Equipment/Facilities	4
Industrial/Residential Waste	0.5 acres
Underground Mine Fires	4.25 acres (includes surface burning)
Hazardous Water Body	1 acre

## Planning, Designs, Waterlines, & Emergencies

- Sent 26 Environmental Assessments to OSMRE for Authorization to Proceed with projects.
- Submitted, completed, and incorporated 140 Problem Acres (PADs) into the National Enhanced Abandoned Mine Lands Inventory (eAMLIS).
- Completed designs for 8 in-house projects and 6 contract projects.
- Completed 9 waterline projects, serving 175 customers and awarded 2 waterline projects serving 54 customers.
- Completed exploratory right of entry on 16 regular grant projects and 3 emergency projects. and construction right of entry on 11 regular grant projects.
- Completed construction right of entry on 11 regular grant projects, 25 emergency projects, and 28 maintenance projects.
- Conducted 587 investigations and responded to 27 emergencies.



## Supporting Offices

### Office of Environmental Advocate

The Office of Environmental Advocate assists the public in obtaining agency information and technical data, encourages citizen participation during public comment periods, and works closely with DEP offices to develop informational workshops and public forums to address state environmental concerns.

#### **During FY20, OEA accomplished:**

- Continued participation with government and non-government stakeholder-based workgroups to address state and regional environmental concerns.
- Continued assistance to citizens and environmental groups by providing technical assistance and clarification of DEP regulations and policies.
- Served as co-lead for the ongoing interagency review of the citizen complaint response and tracking system within DEP.
- Addressed public inquiries regarding environmental concerns that are received on a daily basis in the Office of Environmental Advocate, and also referred to that office via Gubernatorial, Congressional, and Legislative Offices.
- Assumed lead role in developing improved communication between DEP and citizen groups in Jefferson County concerning the new Rockwool industrial facility.
- Continued leadership role for WVDEP's Pipeline Working Group between the agency and citizens groups.
- Participated as a member of WVDEP's team charged with determining candidates for the Governor's Lakes Initiative.
- Participated as a member of the multi-agency state team involved with the identification and selection of the newly announced Virgin Hyper Loop test facility in Tucker County.
- Served as WVDEP co-lead in FERC relicensing of Hawks Nest Hydro facility, especially coordination for the significant public benefit projects associated with that process.
- Delivered WVDEP presentations to civic, and environmental organizations and community groups, and the West Virginia Youth Conservation Camp.

### Youth Environmental Program

The OEA's Youth Environmental Program (YEP) provides an opportunity for the youth in West Virginia to participate in environmental projects within their communities. It is designed to unite existing youth groups such as 4-H clubs, scouts, FFA chapters, elementary, middle and high schools, and others toward the common goal of protecting our environment. The program offers an annual Junior Conservation Camp, Youth Environmental Conference and Youth Environmental Day and awards \$15,000 in cash and other prizes – including a college scholarship. For FY20, the YEP:

- Had 1,071 clubs enrolled in the program, represented by 140,545 members.
- Had volunteers log 49,377 volunteer hours.
- Contributed \$1,255,657.10 total dollar amount through volunteering (*based from the Independent Sector's estimated value of a volunteer hour*)



## Rehabilitation Environmental Action Plan (REAP)

The OEA's Rehabilitation Environmental Action Plan – The Next Generation works to make West Virginia the cleanest state in the nation. Pollution Prevention and Open Dump, Make-It-Shine, Adopt-A-Highway/Adopt-A-Spot, Clean Streams Initiative, Statewide Recycling and Operation Wildflower are the state's cleanup and beautification programs. They are all housed within WVDEP, providing citizens with a control location to learn about and participate in volunteer cleanup initiatives.

### For FY20, REAP accomplished:

	PPOD	AAH/AAS	WVMIS	OPERATION WILDFLOWER	RECYCLING	REAP TOTAL
Dumps eradicated	1,004		7			1,011
Acres reclaimed	732		0			732
Miles roadway cleaned		1,446	10			1,456
Miles stream cleaned	78		7			85
Acres park cleaned			0			0
Miles trail cleaned			0			0
Active AAH groups		476				476
OWF plots				68		68
Tons litter/waste collected	2,322	118	463			2,444.63
Tons scrap recycled						
Appliances recycled						
Waste tires collected	126,484		408			126,892
Tons plastic recycled		0.04				0.04
Tons glass recycled		0.03				0.03
Tons aluminum recycled		0.27	0			0.27
Tons paper recycled (tons)					2186	2186
Volunteers participating	236	6,709	165			7,110
Recycling Grants Awarded					27	\$1,528,114.82
CED Grants Awarded					12	\$133,261
Litter Control Grants					35	\$94,800





## Business Operations Office

The Business Operations Office (BOO) provides financial, procurement, and property management services to all of WVDEP's programs, divisions, and offices.

### **During FY20, BOO accomplished:**

- Processed 5,101 purchasing documents for a total of \$47,458,205.26.
- Held various purchasing training sessions at the DLR Conference.
- Administrative Services took over all facility orders and building-related invoices for all WVDEP offices and created process to maintain these requests and payments.
- Audited, reviewed, processed and paid 10,970 P-Card transactions totaling \$5,621,865.89
- Provided P-Card training at the DLR Conference.
- Implemented COVID safety procedures.
- Provided 1-on-1 training on ADO entry for the offices.
- Conducted a survey on Space Utilization across the Agency.
- Updated computer ordering as part of the Efficiency Survey issues.
- Participated in WV State Purchasing's Vendor Open House.
- Privacy doors installed for Office of Legal Services at WVDEP Headquarters
- Installed and implemented telematics pilot for 44 WVDEP fleet vehicles
- Streamlined ARI repairs and entered all driver information into ARI to streamline fleet data to one system.
- Processed and approved 519 fleet repairs \$261,166.37 for FY20. Savings of \$349,833 from previous FY.
- Received 90 new and retired 90 vehicles from previous orders
- Placed additional order to replace 44 vehicles.
- Built Power BI reports to report legislative mandated reporting for commuting and usage to FMD
- Emergency evacuation procedures for Elkview office to BRIM
- Shifted to remote working with zero difficulties and remain productive and communicating effectively
- TVs upgrades purchased for Black Bear, Rhododendron, and Sugar Maple conference rooms.
- Purchased camera for use in conference rooms for demo.
- Replaced furniture in Dolly Sods.
- Created the Safety Handbook.
- Held a successful CPOD drill.
- WV Room upgrade to A/V system install.
- Fayetteville Conference Room TV installs.
- WVDEP Headquarters phone conversion to Segra.
- Elkview phone conversion to Segra.
- COVID prep and plans.
- 20 trips to Surplus/E-Recycle.
- Surplused 825 Computer/Electronic Assets.
- Surplused 560 Cisco telephone sets.
- Eliminated Aqua Fix Dosing Unit in Philippi.
- Successful sell on site and agency reimbursement of several large items, totaling \$65,197.45 returned to the agency.
- Refreshed all AS intranet sites. Created Footwear page.
- Begin replacing B/W Copiers with Color Copiers to eliminate the purchase of color printers and toner.
- Rewrote agency Respiratory Protection Policy.
- Had 14 assets removed from inventory, due to theft, loss or damage.
- Accounts Receivable collaborated with IT and the State Treasurer to make online payment of invoiced permitting fees.
- Implemented ApplicationXtender as the method for employees to submit invoices electronically, eliminating the need for paper invoices, and increasing efficiency.
- Fully implemented the OASIS Grant Lifecycle Management module, reporting 27 new grants to the Governor's Office.
- Reported 116 new sub grants to the Governor's Office.
- Completed and submitted the Closing Books information on time.
- State audit resulted in no findings for WVDEP.
- Implemented GASB 68 and GASB 75 in the financial reporting for the SRF program.
- During FY20, the SRF audit was completed for FY19 and resulted in no findings.



## Human Resources

Human Resources (HR) manages all employment matters for the DEP. Two units within the division manage pre-hire matters (recruiting, interviewing, assessment and offers of employment) and post-hire (transaction processing, time and attendance, benefits, disciplinary matters, training and succession planning).

### During FY20, HR accomplished:

- Received 522 applications and processed 133 job postings.
- Processed 1,032 employee transactions, including new hires, promotions, pay progression increases, reallocations, internal equity increases, and disciplinary actions.
- Processed 22 retirements, 5 terminations, 23 resignations, and 9 transfers.
- Streamlined the hiring process, in order to attract and employ new employees more quickly.
- Increased training for hiring managers.
- Developed a new Intranet site.

## Information Technology (IRIS)

The Information Technology Support Office (IRIS) develops and implements applications needed by the divisions and offices of the WVDEP. Our applications are designed to support the DEP vision and mission.

### During FY20, IRIS accomplished:

#### Infrastructure Support

- Increased security through reacting to vulnerability scans, patching, improved logging, new and
- improved firewalls, and system upgrades.
- Increased speed and features of Citrix for Pandemic support.
- FISMA Compliance effort started.
- Eliminated costs by reducing Windows/MSSQL server license utilization by combining roles onto less servers.
- Continuous work on improving the style and /layout of the public website.

#### Application Development and Support

- Under 100 bugs open.
- Updated Electronic Submission System for security and code migration.
- DataWarehouse Phase I to complete in 2020.

#### TAGIS

- Migrated agency's spatial data servers to a virtual environment and completed a major version upgrade.
- Added a new server for hosting image data used for web mapping and GIS desktop applications.
- Installed and configured ArcGIS portal, allowing users to publish and share GIS data.

- Developed mobile applications for dam safety and highways in bloom programs.
- Collected and/or processed UAV images for over 16 flights, creating edited video, orthophotography, and elevation data for various WVDEP projects.
- Designed solution that allows interactive visualization and analysis of 3D data from UAV flights using just a web browser.

## Public Information Office

The Public Information Office (PIO) provides the public with access to public records, environmental information and educational resources. This includes writing and issuing news releases, coordination public outreach events, acting as the agency point-of-contact for the media, producing educational materials in traditional print format, as well as multimedia projects, and facilitating responses to Freedom of Information Act (FOIA) requests.

### During FY20, PIO accomplished:

- Researched, composed and published 40 press releases regarding agency dealings and regulatory actions.
- Processed and tracked 1,200 Freedom of Information Act (FOIA) requests .
- Facilitated 12 public hearings and meetings to gather public input on various WVDEP actions and implemented virtual hearings.
- Responded to media inquiries from local, state, and national media regarding various environmental topics.
- Designed several marketing and educational tools, as well as provided editing services for a wide variety of agency publications and correspondence, including calendars, newspaper advertisements, YouTube playlists, brochures, and virtual workshops.
- Published the 28th issue of the DEP Annual Report.
- Produced 50 new weekly episodes of Environment Matters for YouTube, Facebook and Twitter.
- The DEP's Environment Matters YouTube channel had: 41,600 video views (up 29 percent from previous Fiscal Year), for a total of 1,800+ hours of watch time (also up 29 percent) and 181 new subscribers (up 50 percent).
- Further grew WVDEP's social media presence on Twitter: 16 percent increase in followers; 195 Tweets; Tweet impressions (total number of times our Tweets have been seen): 366,236.
- Further grew DEP's social media presence on Facebook: 30 percent increase in followers; posts: 215; total reach (the number of times it appeared in a newsfeed): 341,800; total engagement (the number of likes, shares, video views or links clicked) 34,162.



## Boards and Commissions

### Air Quality Board

The Air Quality Board (AQB) is a quasi-judicial body responsible for hearing appeals regarding the issuance or denial of permits, permit conditions, or enforcement decisions rendered by the Division of Air Quality. Citizens and the regulated community file appeals with the board.

#### Board members:

- J. Michael Koon, chairman; R. Thomas Hansen, Ph.D., vice chairman; Grant Bishop, Department of Agriculture; Jon Blair Hunter; Walter M. Ivey, P.E., Bureau for Public Health; Robert C. Orndorff, Jr.

#### During FY20, the AQB accomplished:

- Maintained filings of appeals regarding the air quality permitting and enforcement program.
- Updated the appeal process step-by-step guide on the board's website.

### Environmental Quality Board

The Environmental Quality Board is a quasi-judicial body responsible for hearing appeals regarding the issuance or denial of permits, permit conditions, or enforcement decisions rendered by the Division of Water and Waste Management. Citizens and the regulated community file appeals with the board.

#### Board members:

- Edward M. Snyder, Ph.D., chairman; Charles C. Somerville, Ph.D., vice chairman; William H. Gillespie; Marybeth Winters, P.E.; Stephen G. Capelli, Sr., P.E.

#### During FY20, the EQB accomplished:

- Received and docketed 13 new appeals and entered 11 orders.
- Held 11 prehearings, three status conferences, two stay hearings, one informal hearing - motion for additional discovery, five conference calls to deliberate, and one administrative meeting.
- Downloaded notices of appeal, certified records and orders to the board's website.
- Updated the appeal process step-by-step guide on the board's website.

### Oil and Gas Conservation Commission

The Oil and Gas Conservation Commission (OGCC) regulates the drilling of deep oil and gas wells in the state. The OGCC approves drilling permits and conducts hearings on matters relating to the exploration for or the production of oil and gas from deep wells. Hearings are held to determine the optimum spacing of wells, as well as to pool the interests of royalty owners and operators of a drilling unit. Additionally, the OGCC conducts hearings on matters using lands for the secondary recovery of oil and/or natural gas. The OGCC also serves as technical advisers on oil and gas issues to the chief of the OOG, to the DEP, and to other state agencies having responsibility to the oil and gas industry.

#### Mission points of the OGCC

- Foster, encourage, and promote exploration for and development, production, utilization, and conservation of oil and gas resources;
- Prohibit waste of oil and gas resources and unnecessary surface loss of oil and gas and their constituents;
- Encourage the maximum recovery of oil and gas; and
- Safeguard, protect, and enforce the correlative rights of operators and royalty owners in a pool of oil or gas to the end that each such operator and royalty owner may obtain his or her equitable share of production from such pool of oil and gas.

#### Commission members:

- Randall M. Albert, chairman and commissioner; Robert Radabaugh, member; Michael McCown, member; Austin Caperton, ex-officio; James Martin, ex-officio.

#### During FY20, the OOGC accomplished:

- Approved 67 deep wells;
- Held 18 administrative hearings;
- Collected \$201,452.78 in leased acreage taxes.



## Surface Mine Board

The Surface Mine Board (SMB) conducts hearings on appeals presented to the board by any party that believes it is aggrieved by a decision of the DEP's Cabinet Secretary. Decisions appealed include permits issued, permit applications denied, notices of violation and failure to issue notices of violation for alleged violations of law or regulations.

### Board members:

- Mark Schuerger, Chairman, coal industry; James Smith, Vice-Chairman, engineering; Richard Flanigan, forestry; Steve Butler, agriculture; Sen. Jon Blair Hunter, advocacy of environmental protection; Dr. Henry Rauch, water pollution control; Ronald L. Crites, general public interest; Charles K. Meadows II, quarry operations.

### During FY20, SMB accomplished:

- 3 new appeals filed: 1. 20-01-SMB (*Greenthorn v. WVDEP*), 2. 20-02-SMB (*Ozias Energy v. WVDEP*), 3. 20-03-SMB (*Riverside Energy v. WVDEP*).
- No new board meetings and 2 SMB Orders issued.

## Solid Waste Management Board

The Solid Waste Management Board (SWMB) is an independent entity that develops solid waste management plans, disburses loans and grants for solid waste disposal projects, and provides program implementation and technical assistance to 50 county and regional solid waste authorities (SWAs) and other government entities in solid waste management. This includes municipalities that have been mandated by the Legislature to establish source separation and curbside recycling programs.

### During FY20, the SWMB accomplished:

- Met 14 times, evaluated and approved seven Commercial Solid Waste Facility Siting Plans and five Comprehensive Litter and Solid Waste Control Plans, met or made contact with 50 local solid waste authorities (SWAs) and municipalities to conduct program reviews, provided technical, financial and business assistance, promoted recycling, market development, and planning functions.
- Distributed \$1.3 million in solid waste assessment fees to 50 local and regional solid waste authorities, awarded \$449,694 in grant funds to 36 local SWAs for a variety of improvement projects, including landfill and recycling processing equipment, financial examinations, educational training and certifications.
- Completed 28 quarterly performance measures three biennial performance reviews on SWAs operating commercial solid waste facilities to gauge productivity, determine effectiveness and efficiency of facility operations and identify serious impairments. Impairments identified in a biennial performance review placed the Tucker County SWA in a "seriously impaired" category. In accordance with W.Va. Code § 22c-3-26, the SWMB voted to supersede until the SWA is able to address and resolve impairments identified in the Aug. 21, 2019 performance review.



west virginia department of environmental protection