

AML Reclamation and Offsite Job Generation

Introduction: Pennsylvania and many other states throughout the country have legacy, pre-Surface Mining Control and Reclamation Act (SMCRA), coal mining impacts. Pennsylvania's legacy includes more than 5,500 abandoned mine drainage (AMD) impacted stream miles, and approximately 190,000 impacted acres. As Pennsylvania works to functionally address Chesapeake Bay restoration goal deficiencies, it is imperative that mine reclamation occurs. Under the Bay Watershed Implementation Plan (WIP), Pennsylvania is responsible for reclaiming 14,562 mine impacted acres by 2025.

According to Datashed (<http://www2.datashed.org/>), a FPW-supported project portal for AMD systems, Pennsylvania treats 66B gallons of AMD annually. Assuming the discharged water meets industrial water parameters, and using a flat rate estimate of \$4/1,000 gallons one gets a value of \$265,335,962. Water degradation negatively impacts fish and aquatic organisms, which further impacts local economies. An antiquated 2007 PA Fish and Boat Commission report on the loss of recreational fishing revenues, places that value at \$93M annually (see attached).

For those not directly involved in reclamation, it may be easy to view the process as strictly environmental and with only on-site job creation. This is not accurate. Numerous sectors are involved in reclamation—many of which are off-site. In fact, a PA Department of Environmental Protection Bureau of Abandoned Mine Reclamation (DEP BAMR) Contractors' List of vendors expressing interest in reclamation or associated with reclamation totaled more than 600 companies.

Project Services and Categories: Stark differences occur between passive and active treatment systems. The following list is intended to showcase services that may not conventionally be associated with reclamation:

- Trucking and earth moving services,
- Piping, valving, manholes, and control boxes (water conveyance systems),
- Topsoil and mushroom compost (not always),
- Seeding (wildflower or grass mixes),
- Stone (high calcium carbonate equivalent limestones) for passive treatment,
- Stone for conveyance channels and surface water diversions,
- Engineering services,
- Hay, straw, silt fence, etc (erosion and sedimentation control devices),
- Concrete or other containment solutions (not all, but some examples exist where epoxy coated concrete containers are used),
- Silos (active treatment systems),
- Clarifiers (active treatment systems),

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Earth Wise Consulting, 2016.



- Concrete and steel reinforcement (active systems),
- Steel pilings (active treatment systems),
- Signage,
- Gates,
- Aggregate for access roads,
- Trees for landscaping,
- Clay for berms (if suitable material is not on-site),
- Synthetic liners (if suitable material is not on-site),
- Hauling and disposal services (often these sites serve as make-shift, illegal dump sites),
- Prefabricated steel buildings (for active and passive systems),
- Heavy equipment supply stores and mobile repair services,
- Local restaurants/convenience stores,
- Gas stations,
- Diesel delivery services (some will order diesel for delivery others will get it at a gas station and put it in their own tanks),
- Bituminous asphalt for repairing road cuts,
- Boring services (if they can't open cut highways and have to drill under them),
- Utility workers (if utilities need relocated or if utilities need ran to the site—especially power to active treatment systems),
- Steel workers (if systems require construction of large steel components—St. Michael active treatment),
- Specialized pipefitters (rubber welding at St. Michaels),
- Geotechnical services,
- Insurance/bonding companies,
- Colleges/Universities (interns or water quality sampling),
- Conservation district and other compliance workers,
- Traffic control and safety personnel (for jobs along busy highways or where access may require traffic control),
- Companies providing mobile job trailers for storage and office space,
- Portable toilet and sewage disposal companies,
- Analytical lab services, and
- Hotels/motels (not all project are done by local companies that can travel to and from the job site).



Reclamation Job Profile: The following are provided by the Pennsylvania Department of Labor and Industry’s (DLI) County Profile reporting for February 2016. Of additional significance, Cambria County listed 18 employers in the mining/oil and gas sector, employing 358 individuals. Those workers ranked third in salaries (\$56,140) behind only utility workers and professional/technical services. Additionally, the report listed that 140 miners exhausted their unemployment benefits.

DLI report stats:

<http://www.workstats.dli.pa.gov/Documents/County%20Profiles/Cambria%20County.pdf>

Category	Cambria	PA	% of PA average
Per capita	37,536	47,679	79%
Median Income	42,304	53,115	80%
Unemployment	6.8	5.2	131%

Ehrenfeld Project Example: This project benefits three Cambria County Municipalities: Croyle Township, East Taylor, and Ehrenfeld Borough. This DEP BAMR 160 acre project is intended to eliminate public health and safety concerns arising from abandoned mine land (AML) features that are located within close proximity to municipality residents. Primary AML concerns include: steep highwalls, refuse piles that are moving and endangering life and property, burning refuse material, and open pits. In addition to health and safety concerns, the project will help mitigate environmental concerns associated with sediment and pollution loadings into the Little Conemaugh River Basin. DEP contracted with Rosebud Mining for reclamation services. Under this 36 month contract, Rosebud intends to call back 40 furloughed miners. The table below shows estimated Davis Bacon Wage Act worker salaries. Reclamation will result in developable space, green space, augment existing trails, and augment efforts underway to restore 35 miles of impacted waters within the watershed—leveraging an additional \$18M.



Funding Source: Federal Office of Surface Mining Reclamation and Enforcement
 (Abandoned Mine Lands Fund)

Project Cost: \$25.5M **Local Match:** \$600,000 **FTE Created:** 40

Worker Wages (based on WDA 04-01-16):

Category	Group	Wage	Fringe	Total	Assumptions
Heavy Equipment	Operators #1 (dozer, trackloader)	\$30.19	\$19.18	\$49.37	dozer over 25,000 lbs and 6/27/14 PA4 determination
Heavy Equipment	Truck Driver Group #2	\$27.75	\$16.69	\$44.44	tri-axle trucks and 6/27/14 PA4 determination
Heavy Equipment	Truck Driver Group #3 (Articulated)	\$28.23	\$16.98	\$45.21	
Annual Income					
Class	Hours Worked	Total Payout			
Operator #1	2080	\$102,689.60			
Truck Driver #2	2080	\$92,435.20			
Truck Driver #3	2080	\$94,036.80			
Foreman Left Out of Calcs					
Source: http://www.wdol.gov/wdol/scafiles/davisbacon/pa4.dvb					

