Pennsylvania Organization for Watersheds and Rivers

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As you are likely aware, federal funding programs have made available an unprecedented $16 billion to address a significant portion of the legacy pollution associated with acid mine drainage (AMD) and abandoned mine land (AML) reclamation and revitalize communities in PA, including $11.3 billion in AML/AMD funding, for 15 years. The Pennsylvania Department of Environmental Protection, the state agency responsible for distributing this funding, specifically identified community-based watershed organizations (CWOs) as eligible "subrecipients" of funding.

The Pennsylvania Organization for Watersheds and Rivers (POWR) engaged a consultant team to research and present a final report that would define the historical role of CWOs, the challenges they currently face, and the conditions and support necessary to ensure meaningful, practical, sustained CWO engagement in the acceleration of AMD remediation in PA and its long-term benefits for water quality.

POWR is pleased to share the final report, "Community-Based Watershed Organizations' Roles in AML/AMD Projects in Pennsylvania." This report includes a summary of Barriers and Recommendations developed by the consultant team. It also includes a section, created by POWR, describing the recommendations POWR is committed to working to advance, in coordination with key partners and pending funding and other support to do so.

We encourage any stakeholders with questions, or who are interested in viewing the complete list of Barriers and Recommendations to determine which align with their own missions and capacities, to contact POWR and/or the report authors.

**DISCLAIMER**
**The views and opinions expressed in this report are those of the authors, the survey respondents, and the parties who participated in focus group interviews and do not necessarily reflect an official policy or position of the Pennsylvania Environmental Council or its affiliate the Pennsylvania Organization for Watersheds and Rivers.**

# Community-Based Watershed Organizations Role in AML/AMD Projects in Pennsylvania

***A Stream Restoration Incorporated (SRI), Eastern Pennsylvania Coalition for Abandoned Mine Reclamation (EPCAMR), and Western Coalition for Abandoned Mine Reclamation (WPCAMR) Project***

## Final Report

**Prepared for the Pennsylvania Organization for Watersheds & Rivers (POWR)**

September 2024

POWR
Pennsylvania Organization for Watersheds & Rivers

WPCAMR

EPCAMR
Eastern Pennsylvania Coalition for Abandoned Mine Reclamation

SRI

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## Executive Summary

Coal mining has taken place in Pennsylvania since at least the late 1700s which has resulted in extensive land and stream impacts including more than 5,500 miles of stream polluted by acid mine drainage (AMD). Community-based Watershed Organizations (CWOs) have been actively working for the past several decades to address these abandoned mine land issues and restore their local watersheds. They have weathered various changes to the funding, political, regulatory, and public interest landscapes and remain dedicated to being part of the solution. With the development of the new Bipartisan Infrastructure Law (BIL) funded AML/AMD grant program, the Pennsylvania Organization for Watersheds and Rivers (POWR) wanted to complete a study and report to document past successes and identify current potential barriers, concerns as well as develop potential solutions to these issues. To accomplish this task, a collaborative effort with Stream Restoration Incorporated (SRI), the Eastern Pennsylvania Coalition for Abandoned Mine Reclamation (EPCAMR), and the Western Pennsylvania Coalition for Abandoned Mine Reclamation (WPCAMR) was formed.

For the purposes of this study and report, a CWO was defined to include local, community-based grassroots watershed organizations, small nonprofit and land conservancy organizations, as well as County Conservation Districts with the added focus of those who are working on addressing AML/AMD issues in Pennsylvania. Due to the limited funding available, an extensive and in-depth research approach was not possible, requiring the AMD Team to minimize expenses while optimizing existing data and utilizing technologies to gather additional data quickly and efficiently. The study included compiling existing data, conducting a webinar, in-depth survey, and personal interviews to cover a wide range of topics such as:

- Organizational capacity and structure
- Financial management
- Insurance and legal compliance
- Past involvement in Abandoned Mine Reclamation projects
- Operation & Maintenance and Repair (OM&R) of AMD Treatment Systems
- Grant management
- Participation and concerns related to PA DEP's new AML/AMD Program

A total of 296 survey invitations were sent with 77 responses. Several responses had to be eliminated for various reasons leaving 64 survey respondents or 22% completion. Following the survey's closing, an initial review of the individual survey responses was conducted to help identify individuals/organizations that warranted further discussion for increased information and to be contacted for interviews. A total of 22 people, representing 21 different organizations, were interviewed during 19 interview sessions. Based upon data collected from the surveys, interviews, and personal discussions held with members of these groups select barriers, concerns and impediments were identified and organized into relevant topics such as grant administration and management, technical deficiencies, liability and legal concerns, policy issues, capacity, and operation, maintenance, and rehabilitation. The issues identified were not intended to just be a list of grievances and complaints, but an opportunity for all involved to work together to find solutions in a positive constructive manner. A list of more than 80 recommendations were developed to address these issues and identified some potential organizations that may be able to lead these efforts. Further work is now needed to identify partners and implement the recommendations. It is hoped that this study will enable and advance meaningful, practical, and sustainable participation of CWOs in the accelerated remediation and restoration of Abandoned Mine Drainage (AMD)-impaired waterways in Pennsylvania.

**Introduction**

The Pennsylvania Organization for Watersheds and Rivers (POWR) sought the development of the following report through a collaborative effort with Stream Restoration Incorporated (SRI), the Eastern Pennsylvania Coalition for Abandoned Mine Reclamation (EPCAMR), and the Western Pennsylvania Coalition for Abandoned Mine Reclamation (WPCAMR). The research and recommendations herein aim to enable and advance meaningful, practical, and sustainable participation of community-based watershed organizations (CWOs) in the accelerated remediation and restoration of Abandoned Mine Drainage (AMD)-impaired waterways in Pennsylvania.

Pennsylvania's history of successful AMD project implementation by CWOs was explored by highlighting the ways in which CWOs have advocated for, managed, and administered projects, secured various funding sources, and leveraged community partnerships. Specific challenges and hurdles that CWOs encounter were used to develop recommendations to fill gaps in service that, once provided, could propel our collective AMD remediation efforts into the future.

**Background**

Pennsylvania's land and waterways are plagued with pollution left over from coal mines that were abandoned prior to the enactment of the federal Surface Mine Control and Reclamation Act of 1977 (SMCRA)[1], and thus have no responsible party. Some abandoned sites have been discharging non-point source water pollution called Abandoned Mine Drainage (AKA acid mine drainage) (AMD) for well over one hundred years. As a result, there are over 5,500 miles of AMD-impacted waterways in Pennsylvania alone[2].

With our state's extensive background of mining, Pennsylvania is by far the most heavily AMD-impacted state in the nation, and the problem is larger than any state or federal agency assigned to tackle the problem can handle on their own. Consequently, Pennsylvania receives the largest Abandoned Mine Land (AML) grant from the federal government each year to deal with these problems[3]. This large pot of funding means that Pennsylvania Department of Environmental Protection (PA DEP) Bureau of Abandoned Mine Reclamation (BAMR) has a large and competent staff. Additionally, there are citizens and grassroots non-profit organizations who wish to help in the remediation of these discharges, restore the land, and create a safer environment for future generations. And here again, Pennsylvania stands out by having over 100 community watershed organizations (CWO) that have worked on abandoned mine reclamation (AMR).

For the purposes of this study and report, a CWO was defined to include local, community-based grassroots watershed organizations, small nonprofit and land conservancy organizations, as well as County Conservation Districts in Pennsylvania with the added focus of those who are working on addressing AML/AMD issues. The nature and extent of CWO involvement in these projects is specific to each individual organization and often changes over time and per project as each organization's capacity ebbs and flows. It is the potential involvement of CWOs in the new AML/AMD subrecipient award program that we focused on in this study, due to their pivotal role in AMR work throughout Pennsylvania's long history of reclamation and still to this day.

The history of Pennsylvania's abandoned mine reclamation is extensive and it's difficult to pinpoint an exact start due to the many moving parts of AMR work throughout the state. One such start occurred on May 16th, 1967, when Pennsylvania voters approved a $500 million environmental bond issue to address environmental hazards. On January 19th, 1968, the legislature enacted the "Land and Water Conservation and Reclamation Act" (1968 P.L.996, No.443) which directed $200 million of that bond issue toward AML projects and AMD abatement in what became known as "Operation Scarlift" (aka. "Project 500"). This was the first act in the nation to address abandoned mine reclamation, causing Pennsylvania to be a leading state in this line of work. From its start to finish between 1968 to 1982, Operation Scarlift efforts completed 500 stream AMD abatement projects, extinguished 76 mine fires, stabilized 156 subsidence zones, and addressed pollution from 28 refuse piles[4]. Further work was completed by state departments and consultants to document and monitor AMD discharges. Information and data on the AMD discharges were compiled into numerous reports, which remain a valuable resource for those participating in AMD projects today. A list of projects under Operation Scarlift is contained in the Bond Issue Report, and copies of Scarlift Watershed Reports can be found on WPCAMR's Abandoned Mine Reclamation Clearinghouse website. The work completed under Operation Scarlift initiated a strong start to AMR work in Pennsylvania, however, the problem remained too large to fully resolve.

Many CWOs were established in response to specific environmental pressures. County Conservation Districts were created in the 1930's in response to the devastating effects of the Dust Bowl, which gave way to best management practices in farming. In Pennsylvania, Conservation Districts were established in 1945 and their work evolved into all types of local conservation and reclamation projects such as abandoned mine reclamation and the construction of AMD treatment systems. The first Pennsylvania local watershed groups were formed in the 1960s, sparking various federal and state environmental legislation (Figure 1). With the development of the US EPA's 319 Nonpoint Source Program and other fundings sources in the early 1990's, along with the development of low maintenance passive treatment technology at approximately the same time, watershed groups had access to both the funding and the ability to treat sources of AMD that were impacting their local streams. This spurred a wave of new CWOs. Based on available information, estimates of PA watershed groups formed each decade are shown in Figure 1, and the sources used to compile those estimates are listed in Section C of this report's references section.

In 1999, Pennsylvania Governor Tom Ridge announced the Growing Greener Initiative, which was enacted with bipartisan support and passed unanimously in both the PA House and Senate. Growing Greener established Pennsylvania's Environmental Stewardship fund and invested an initial $650 million in environmental projects including AMD remediation[5]. The Growing Greener program, which has evolved in the last 25 years, provided a massive boom to existing watershed groups and the creation of many new watershed organizations who were excited about the possibility of restoring their watersheds (Figure 1). The program not only paid for AMD treatment system construction and subsidized staff to facilitate projects, it also funded the formation of additional non-profit entities that could apply for grants to do this work, which in turn spurred a push for capacity building, provision of supporting

services, and development of partnerships bolstering the watershed organization movement. A whole network was born.

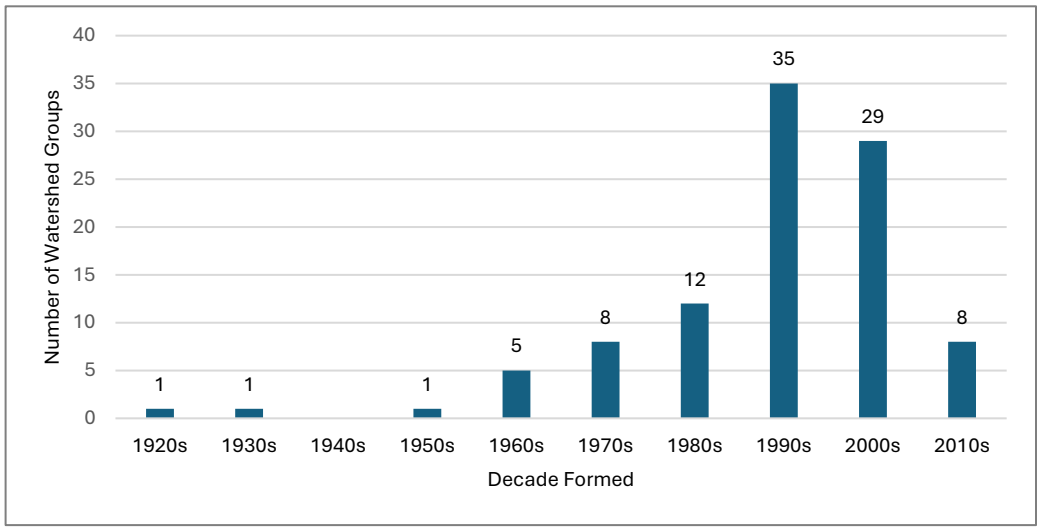



**Figure 1: Estimated Number of PA Watershed Groups Formed per Decade –** Based on watershed group initiation dates listed on numerous groups' websites and social media platforms (References > Additional Resources > Section C), numbers of watershed groups formed per decade were estimated. These numbers do not include the formation of Pennsylvania Conservation Districts and exclude groups/chapters belonging to larger nation-wide organizations. A number of the watershed groups included in these estimates do not focus on AMD work.

Growing Greener also subsidized staff at the County level to coordinate and support our expanding watershed-based efforts. County Conservation District Watershed Specialists (CDWS) are in every county in Pennsylvania, saving Philadelphia. Many CDWS focus their work primarily on AMD in the county they serve. The importance of this is multi-faceted. These individuals are localized experts, often specializing in water quality, with personal knowledge and experience in how AML impacts their communities. They are invested in the outcome of improved water quality, many times serving on the boards, volunteering, and advising the same CWOs that are doing the projects.

Having CDWS at the county level to help with projects in an intimate way breaks down barriers. Non-profit watershed organizations have access to one-on-one, professional, and individualized support in all aspects of project development. CDWS can help with monitoring stream water quality, grant writing, permitting, procurement, grant administration, serve as a pass-through for funding, oversee design and construction services, write reports, and operate and maintain the finished projects. The organizational set up of Conservation Districts varies but many are incorporated non-profits with 501(c)(3) status. Many others are county employees. One commonality of both is that most Conservation Districts applied for their own grants to construct AMD treatment systems in addition to helping other CWOs in their county.

Unprecedented cooperation between non-profits, academics, industry, and regulatory agencies at all levels of government became the structure around CWO AMR work in the early 2000's. Growing Greener grants required support letters as well as a sizable match in cash and/or in-kind goods and services. A number of foundations immediately filled the gaps. College professors and engineers began

exploring and developing passive treatment, which is particularly appealing and approachable for non-profit volunteer organizations. Industry often owned the land and was sometimes willing to donate it for reclamation. Pennsylvania Game Commission also owned land and was eager for reclamation. Over the last 25 years, AMR in Pennsylvania has been a coordinated effort between all partners. Now there are construction contractors, consultants, patented technologies, educational venues, and researchers focused on this work with a shared vision of reclamation. CWO AMR work is, in fact, a community.

A review of available data regarding CWO involvement in AMR projects makes clear that such partnerships have been incredibly successful over the decades, with over 300 passive treatment systems being constructed across 34 out of PA's 67 counties since 1970 (Figure 2). Figure 2 shows counties with the most passive treatment systems, with Bedford County containing the greatest amount at 36[6]. However, findings indicate that CWO involvement in AMD reclamation is not simply concentrated in one area and is instead prevalent across the state where coal mining impacts are present.

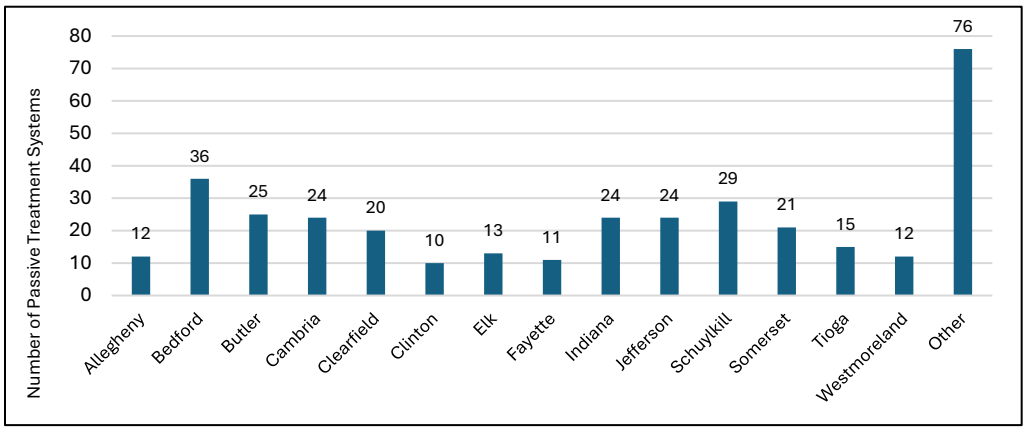



**Figure 2: Number of AMD Passive Treatment Systems Recorded in PA Counties –** based on available data, this bar plot shows counties with the greatest number of PTSs and the amount of PTSs recorded in each.

Figure 3 shows the number of passive treatment systems constructed in PA each decade, with the first of the systems, named SL 142-2 Pigeon Creek, being built in 1970 through an Operation Scarlift project. Interestingly, passive system construction accelerated in the mid-90's, a few years prior to the creation of Growing Greener in 1999 but also following the formation of many watershed groups. However, it wasn't until after Growing Greener's formation that passive system construction peaked shortly thereafter in the 2000's[6]. It should be noted that Figure 3 only accounts for original construction dates of systems and does not include dates for system rebuilds and rehabilitation. Additionally, newer passive treatment systems built after 2023 may not be fully accounted for in this dataset.

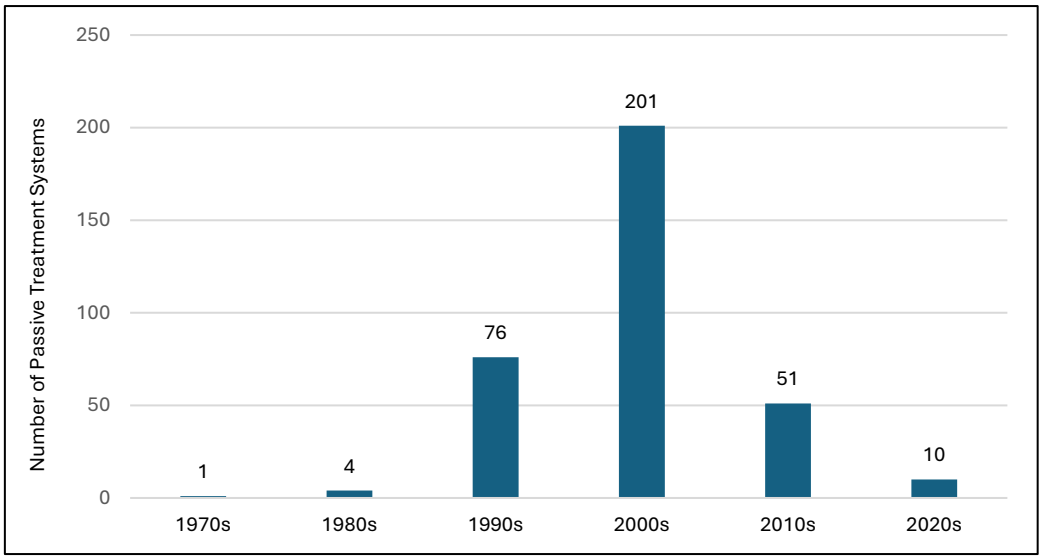



**Figure 3: Number of AMD Passive Treatment Systems Built in PA Each Decade**

These hundreds of passive systems built and maintained by CWOs collectively work to remove thousands of pounds of heavy metals everyday from AMD[6]. This reclamation and restoration success among CWO's can be attributed to strong partnerships and support from state agencies, local governments, and foundations among others. A 2017 survey conducted by WPCAMR titled "Assessing Cooperation in Pennsylvania's Abandoned Mine Reclamation Community" wanted to investigate CWO success in Pennsylvania beyond the previously mentioned points. The survey found that nearly one third of respondents contact another watershed daily, one third contacts another watershed group weekly, and one third contacts another watershed group monthly. Sixty eight percent of survey respondents indicated that they consider a PA DEP employee to be a friend. The working relationship between CWO's and the PA DEP was discussed by George Mason University in a recently published research paper examining public participation in AML programs[7]. This paper discovered that Pennsylvania is the only state that makes its reclamation plan available to the public on their website, indicating transparency in AMR decision-making[8].

Of course, all of this reclamation and restoration work by CWO's could not have been possible without the financial support and funding programs that have played a crucial role in getting projects on the ground. Based on available data from confirmed funding sources for AMR projects, at least $118.9 million is estimated to have been granted from government programs and foundations to fund the design, construction, and O&M of AMD passive treatment systems in PA between 1970 to 2023, prior to AMR/AML Program BIL funding[5,6]. These estimates are broken down by funding source in Figure 4, with the top funders being DEP's AMD Set Aside Program, EPA Section 319, DEP's Growing Greener Program, OSMRE's Watershed Cooperative Agreement Program (WCAP), and leveraged funds from the Foundation for PA Watersheds. Growing Greener provided the greatest amount of funding towards passive treatment projects at an estimated $45 million (Figure 4)[5].

Important funding sources compiled into the "Other" category in Figure 4 include:

- Abandoned Mine Land Economic Revitalization (AMLER)
- Rural Abandoned Mines Program (RAMP)
- EPA Brownfield Grant Program
- Appalachian Region Reforestation Initiative
- WPCAMR's Quick Response Program
- EPCAMR/WPCAMR Regional Watershed Support Initiative (RWSI)
- ARIPPA/EPCAMR/WPCAMR Mini-Grant Program
- AML Trust Fund
- Other programs listed in "References in Additional Resources, Section A" of this report

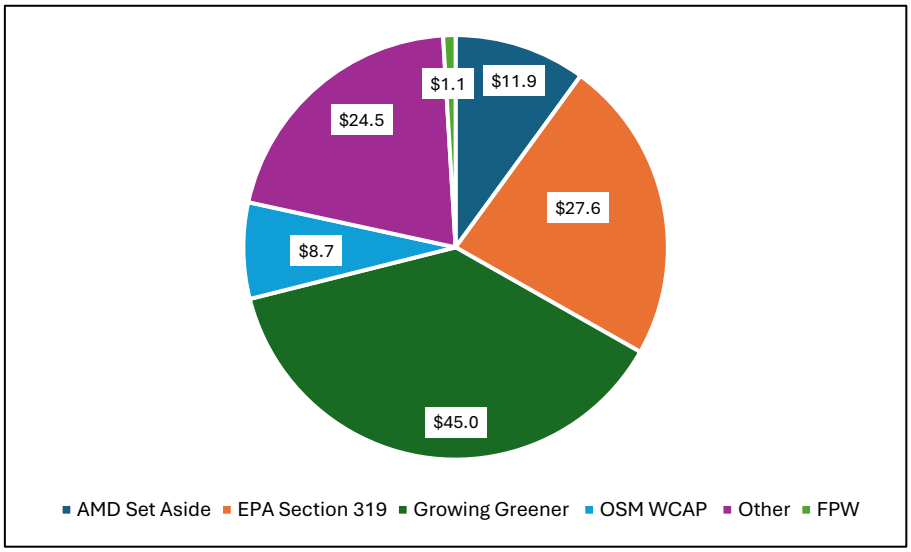



**Figure 4: Estimated Funding in Millions of Dollars from Top Funders for AMD Passive Treatment Projects in PA from 1970-2023**

It is important to note that these are conservative estimates based on known funding records. It is possible the data is underrepresenting the amount of funding for passive system projects in the past. Additionally, Figure 4 only shows funding that went towards passive treatment for AMR projects. Millions of more dollars from programs such as Growing Greener have funded other AMR/AML-related aspects, such as active treatment, monitoring, development of restoration plans, formation of watershed groups, and more.

All of this work completed by CWO's and their partners is important to this day, especially due to the continued operation and maintenance of treatment systems after their construction. Approximately 5.5 million people across Appalachia still live within one mile of an AML site[9]. It is an issue that is visible and recognized by a large portion of Pennsylvania citizens. The widespread participation of Pennsylvania CWOs in something as expensive, chemically nuanced, administratively demanding, and potentially even a liability, as the construction of AMD treatment systems can be, is extraordinary and unique to Pennsylvania. The number of organizations participating, the number of projects those organizations have completed, the facets of each project that they complete, and the miles of stream improvement that can be attributed to their projects is unmatched by any other state or tribe in the nation.

All this isn't to say that the CWO abandoned mine reclamation community doesn't have its challenges. CWO's, who are mostly non-profits, must seek funding through grants and other fundraising and operate on shoe-string budgets. Grants from project implementation often have limited allowance for grant administration making it difficult for CWO's to piece together funds for paid staff. Completing large, expensive implementation projects can be challenging and the legal and financial requirements of managing federal and state grant funds has become increasingly burdensome for all-volunteer groups. This is truer now than ever with the Pennsylvania Department of Environmental Protection's BIL/IIJA Subrecipient Program.

Though it is Pennsylvania DEP BAMR that distributes the BIL/IIJA funds, the funding originates from Federal Law and is overseen by the Office of Surface Mining Reclamation and Enforcement, so with federal funds comes federal regulations. Therefore, recipients (DEP BAMR) and subrecipients of BIL/IIJA funds must adhere to regulations set forth under 2 CFR 200[10], causing there to be increased complexities with handling grant money and a potential need for major adjustments in how AMR projects have been carried out for decades. In addition, as most AMD treatment systems constructed by CWOs have been funded at least in part by state and federal funds, the Commonwealth essentially serves as a pass-through for these funds, meaning they have invested in the outcome and may be "responsible", for lack of a better term, for the long-term operations and maintenance of the systems so that they maintain improved water quality. If the grantee no longer takes care of a system built with state funds for any reason, the Commonwealth could have a responsibility to do so.

Furthermore, due to the new BIL/IIJA funding available for AMR work, Growing Greener's 2024 Program Guidance document states that SMCRA projects under Growing Greener are limited to "ABS Legacy Sites" in PA Code § 86.1, meaning that mine sites must have been permitted and bonded between July 31, 1982 to August 4, 2001 where bonds have been forfeited in order to qualify[11,12]. Now, that means that Growing Greener SMCRA will likely not fund projects on pre-act (1977 SMCRA) abandoned sites. As shown previously in Figure 4, Growing Greener contributed to approximately 38% of the documented funding towards CWO-led AMR projects in Pennsylvania. This is a considerable chunk of the funding that went towards this work, so the adjustment from Growing Greener to BIL/IIJA funds will likely bring about new challenges for CWOs when participating in AMR projects.

This study aimed to better understand the barriers CWO's face in participation in AMR. With these challenges in mind, recommendations to fill gaps in service and necessary program and policy changes were developed that, once addressed, have the potential to facilitate CWO participation in AMR onto this new era.

## Methods and Approach

The following provides a brief description of the method and general research approach to conducting the study. Due to the limited funding available, an extensive and in-depth research approach was not possible, requiring the AMD Team to minimize expenses while optimizing existing data and utilizing technologies to gather additional data quickly and efficiently. A variety of sources of existing data were utilized to provide much of the background information including Datashed (www.datashed.org), PA DEP Grant Center tracking, the Foundation for Pennsylvania Watersheds and archived AMD Conference presentations maintained by EPCAMR at www.treatminewater.com. These sources have been identified as appropriate in the reference section and the paper itself.

An initial Statewide webinar was conducted on April 10, 2024 to initiate the project, introduce the research topic, and begin public engagement. Prior to the webinar, an electronic flyer was developed and emailed to encourage the targeted audience to participate in the project. During the webinar, efforts were made to initiate engagement with the audience to encourage introspection and begin collecting initial information including an ice breaker session at the beginning, a mapping activity to indicate where audience members were from, and various polls. At the conclusion of the Statewide webinar, an announcement was made which "kicked off" the survey.

The survey was developed by the AMD Team prior to the Statewide webinar and conducted utilizing Survey Monkey as the hosting site. The survey was designed to be by invite only to ensure that those who participated in the study were representative of our target cohort and to collect input on a variety of topics from stakeholders to address POWR's goals and assess the CWO's needs, desires, perceived and actual barriers. The survey was designed to be fairly in-depth and covered a wide range of topics including, but not limited to:

- Organizational capacity and structure
- Financial management
- Insurance and legal compliance
- Past involvement in Abandoned Mine Reclamation projects
- Operation & Maintenance and Repair (OM&R) of AMD Treatment Systems
- Grant management
- Participation and concerns related to PA DEP's new AML/AMD Program

Participants of the survey were identified by the AMD Team based upon collective knowledge of individuals from active watershed groups, nonprofits, and conservation districts engaged in the restoration of AMD/AML impacted watersheds. In addition, participants were added based upon external referrals. The first wave of invites were emailed with a direct link to the study at the conclusion of the Statewide Webinar. The survey remained open for five weeks and multiple reminder emails were sent to encourage participation and completion. A total of 296 email invites were sent with 77 responses. Several responses were either duplicates, not our target audience, or not complete enough to be included. This left 64 survey respondents or 22% completion.

Once the survey data was collected, it was compiled into structured formats, including CSV files and Word documents, ensuring that survey responses were securely stored and easily accessible for subsequent analysis. The data analysis phase involved generating summary statistics for each survey question, distinguishing between different types of questions, such as single-column and multi-column "choose all that apply" questions. In parallel, the qualitative data was carefully analyzed to extract key

themes, challenges, and insights, which were then synthesized into narrative summaries. Detailed sectional analyses were also conducted for each segment of the survey, including question-by-question breakdowns and comprehensive section summaries.

The reporting phase involved producing individual section reports that incorporated these analyses, followed by the compilation of these sections into a comprehensive data report. Additionally, expansive narrative reports were developed, synthesizing both the quantitative and qualitative data to provide a holistic overview of the project's findings and implications.

To ensure the accuracy and relevance of the reports, a feedback loop was established, allowing for regular reviews and refinements based on stakeholder input. This iterative process included updates and revisions to the data systems and processes as new insights and needs emerged. Data presentation and dissemination were enhanced through the creation of visualizations, including charts, graphs, and GIS maps, ensuring that the findings were effectively communicated to both public and internal audiences.

The tools and systems employed throughout this process included SurveyMonkey for data collection, Microsoft Excel and Google Sheets for data compilation and analysis, FME Desktop for data processing, and ArcGIS Pro for spatial analysis and map creation. Voyant tools were used for detailed qualitative analyses and word cloud production. Word processing software, such as Microsoft Word and Google Docs, was utilized for compiling narrative reports, while AI services supported data analysis and narrative development.

Throughout the project, key focus areas included maintaining data integrity and security, ensuring that all data was accurate, secure, and accessible only to authorized personnel. Consistency and standardization across all reports and analyses were also prioritized to ensure clarity and comparability of the findings.

Following the survey's closing, an initial review of the individual survey responses was conducted to help identify individuals/organizations that warranted further discussion for increased information and to be contacted for interviews. Other considerations for selection included those who had received a grant from the new PA DEP AMD/AML program, volunteers offering to be interviewed, and recommendations from external organizations. The goal was to conduct approximately twenty interviews as "case studies" to delve further into various groups personal experiences related to the study. Interviews were typically held over Zoom, recorded, and transcribed as feasible; however, a few had to be completed over the phone. Several interviews included more than one person at the same time and some interviewees were representatives of more than one organization. A total of 22 people, representing 21 different organizations, were interviewed during 19 interview sessions.

The interviews all followed the same predetermined outline of topics and questions. Three main topics were discussed including the formation of the interviewee's CWO, the reasons for their success, and the challenges they face in participating in abandoned mine reclamation projects. In depth discussions on the challenges included experiences with the new PA DEP BIL/IIJA subrecipient award program, gaps in

service they would like filled, policy and program changes they would like to see, and general concerns they have with participation in AML/AMD projects.

Once transcribed, the interview data was systematically organized with metadata, including interview dates, participant roles, and key discussion topics. This organization facilitated a smooth transition from data collection to analysis, ensuring that all relevant information was easily accessible.

Thematic analysis was then applied to the interview transcripts, focusing on identifying key patterns and themes. The transcripts were coded to group similar responses, and significant summaries were extracted. These themes were aligned with the broader survey findings, providing a richer, more contextualized understanding of the issues faced by CWOs.

Due to the personal nature of the interviews, an effort has been made to keep this information anonymous and specific details have not been shared in this report. Interview results were analyzed and assessed and organized into 9 categories: Workforce/Professional Development, Grant Management, Indirect Cost Rate, Long-term O&M and Trust Fund Establishment, Understanding Federal Policies & Acts, Liability & legal Concerns, Watershed Assessments, Coalition Building & Partnerships, and CWO Capacity Building. These 9 categories and their associated main points were compiled into a mural board and can be viewed in Appendix A on page 97 of this report. The interview qualitative results were further expanded upon in the Narrative section of the report and split into three categories; formation and experiences of groups, reasons for success, challenges.

Throughout the reporting process, stakeholder feedback was incorporated, allowing for the refinement of the narrative reports. This iterative approach ensured that the final reports accurately reflected the CWOs' experiences and perspectives.

The final reports, including visual elements like word clouds and thematic maps, were presented alongside the survey data to provide a comprehensive view of the project's findings. These reports were designed to be accessible to both public and internal stakeholders, ensuring their broad utility and impact.

## Survey Results and Discussion

The online survey opened on April 10, 2024 and closed on May 15, 2024. Approximately 300 individuals representing CWOs involved in abandoned mine issues were invited to participate. Approximately 22% completed the survey. A few of the surveys completed were removed from the statistical analysis due to a variety of reasons including individuals who did not represent our target audience, surveys not completed to a level that contributed significant information, or duplicate representatives who might skew the data, leaving 64 respondents. It should be noted that not all respondents answered every question and that percentages are typically calculated based upon the total number of responses for the question. The following narrative summarizes and discusses the survey results. The survey questions were grouped in thematic categories:

A. Survey Information

B. Organizational Information

C. Organization Capacity and Structure

D. Financial Management

E. Insurance and Policy Compliance

F. Abandoned Mine Reclamation (AMR) Projects

G. Operation Maintenance and Repair (OM&R) of AMD Treatment Systems

H. Grant Management of AMR Projects

I. PA DEP AML/AMD Program

A data report with summary analysis is provided in Appendix B.

### *Section 1: All Respondents*

#### *B. Organizational Information*

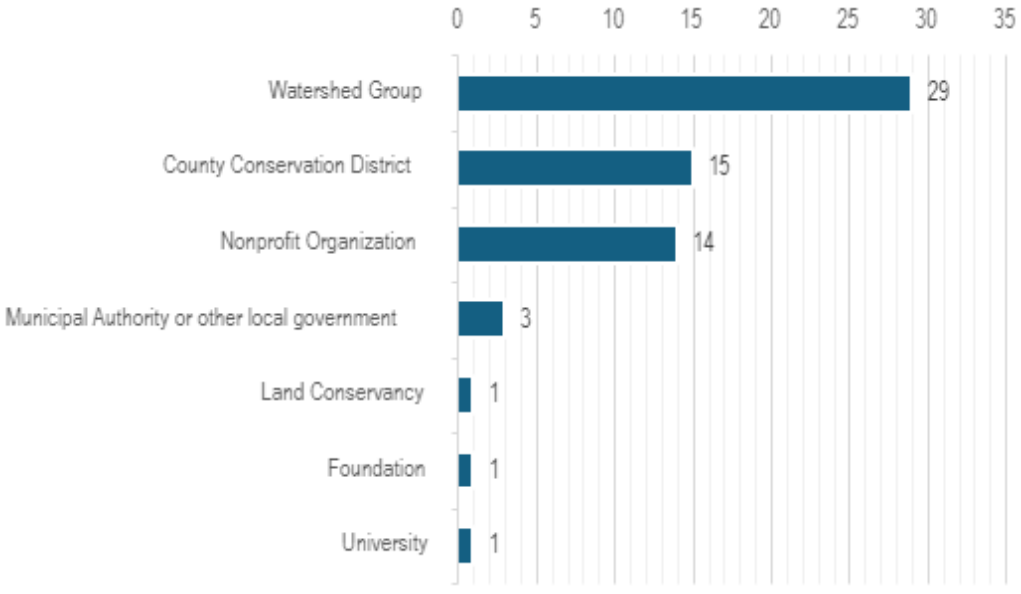



*Figure 1: BQ2. Which of the following categories best describes your organization type?*

Of those individuals that responded to the survey, approximately 45% were from watershed organizations, 23% were from county conservation districts and 22% were from nonprofit organizations (Figure 1).

Generally, these individuals tended to hold a role of majority responsibility within the organization and directly involved with overseeing and implementing AML projects (Figure 2).

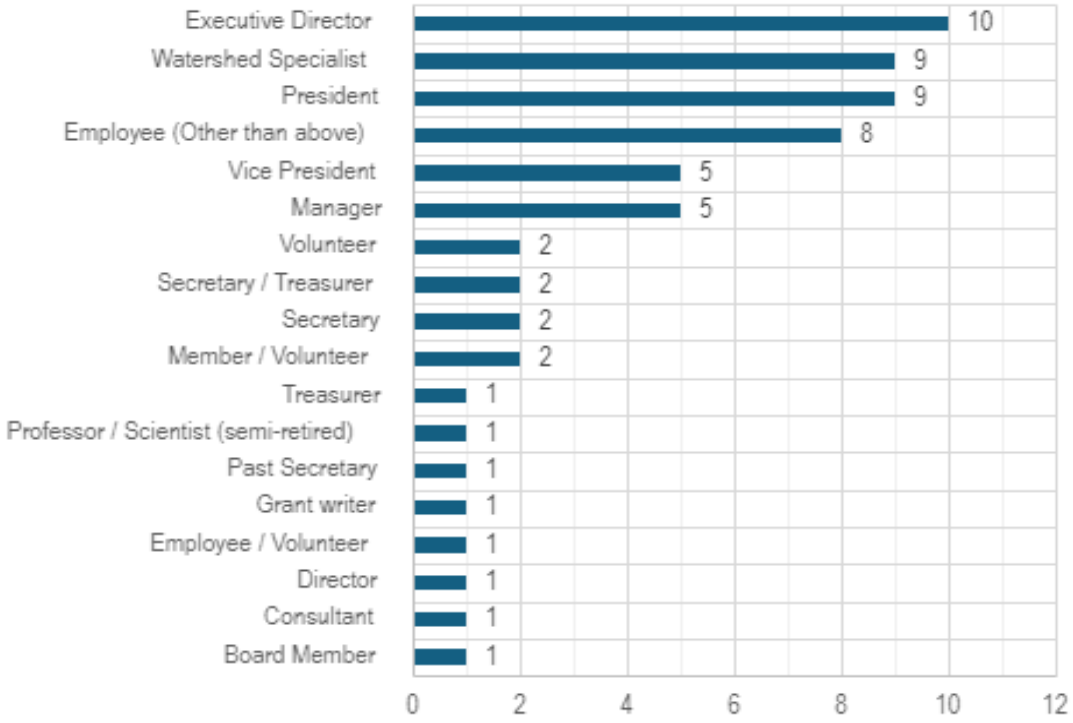



*Figure 2: BQ3. What is your role in the organization? (Check all that apply)*

Information provided by the respondents was utilized to create a GIS map (Figure 3) plotted with abandoned mine land (AML) sites (red) and AMD impacted streams from the 2024 Integrated Waters list (green) further demonstrating that those participating in the survey were representative of stakeholders in the some of the most highly AML impacted watersheds in Pennsylvania.

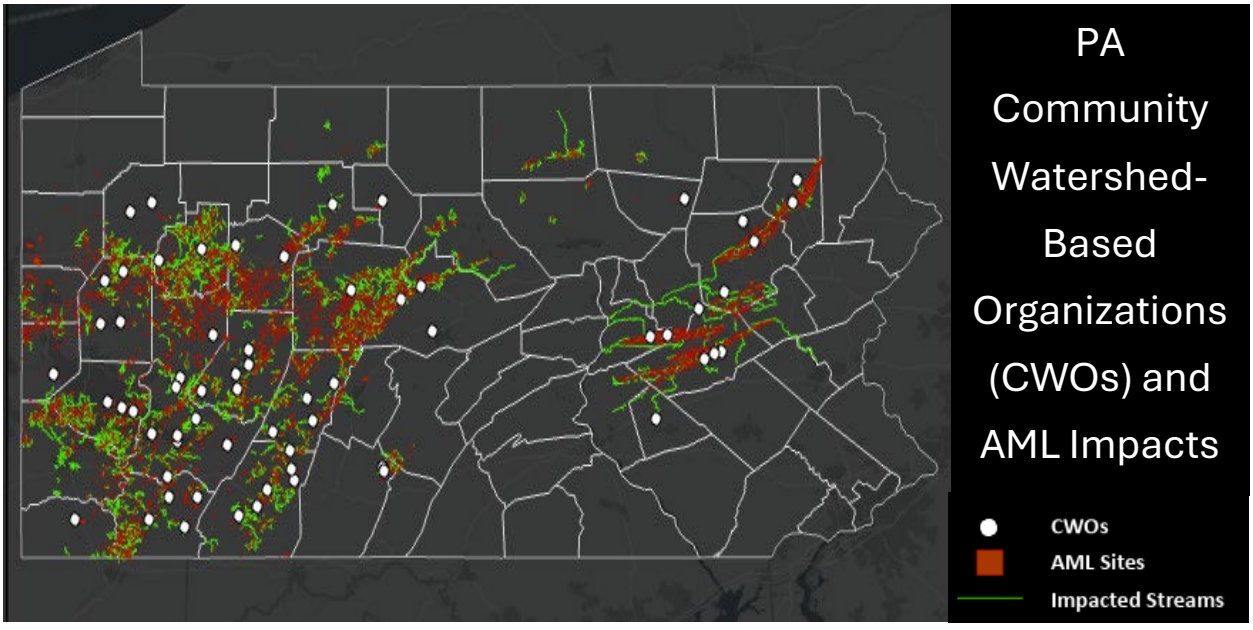



*Figure 3: BQ4. What watershed(s) does your organization operate in?*

Map of survey responses largely from mining-impacted watersheds. Locations were first determined by the centroid of the county answered in question 5 then estimated based on the long text answers submitted in questions B4 and B6.

The data from question B4 "What watershed(s) does your organization operate in?" indicates that these organizations operate in a wide range of watersheds across Pennsylvania.

Responses for question B6 "What municipality does your organization operate in?" vary widely, with some organizations operating across multiple municipalities or townships.

Respondents represented 25 of the 43 counties within Pennsylvania that have known AML issues from both the Anthracite and Bituminous coal fields across Pennsylvania. The broad geographic distribution shows a diverse focus across various environmental regions and watersheds (Figure 4).

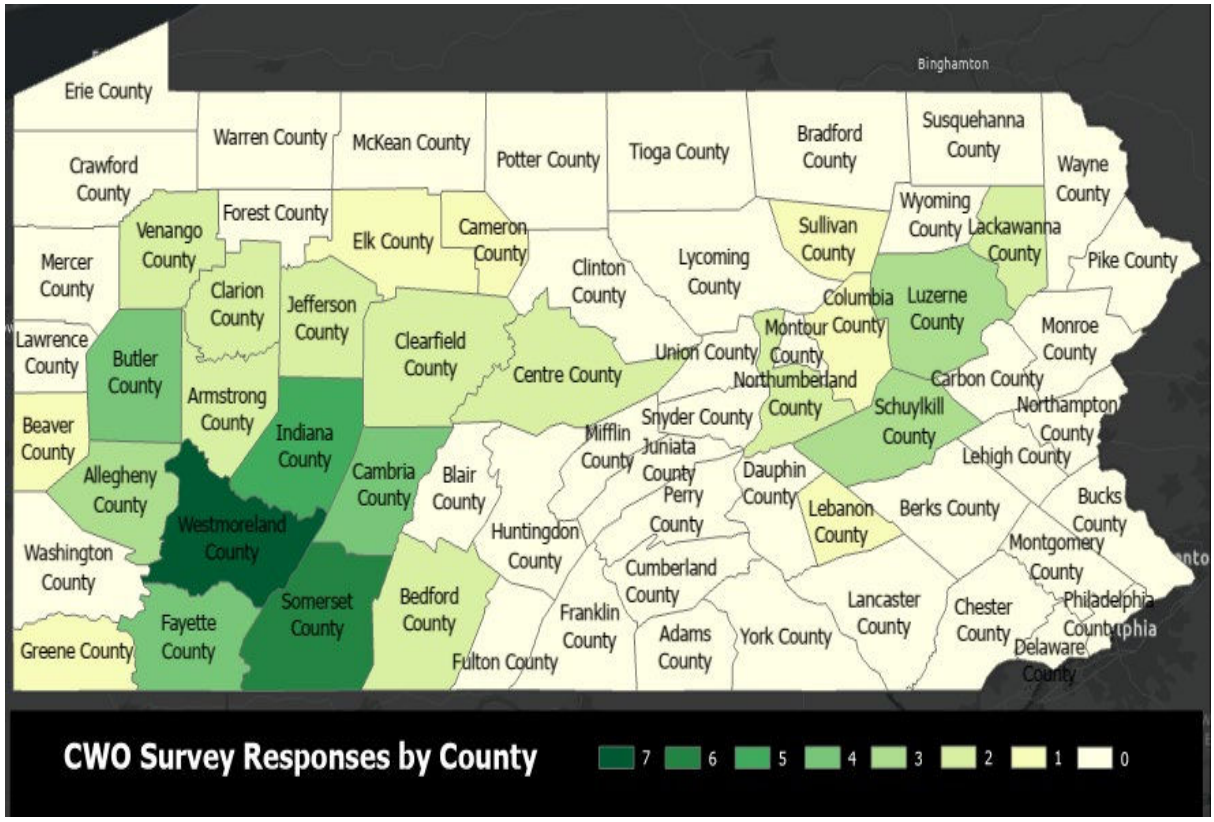



*Figure 4: BQ5. In what county does your organization primarily operate?*

### *C. Organization Capacity and Structure*

The founding years of the organizations vary widely, from as early as 1846 to as recent as 2019. A significant portion of organizations were founded in the late 20th century, indicating a growing awareness and establishment of conservation efforts during that period (Figure 5).

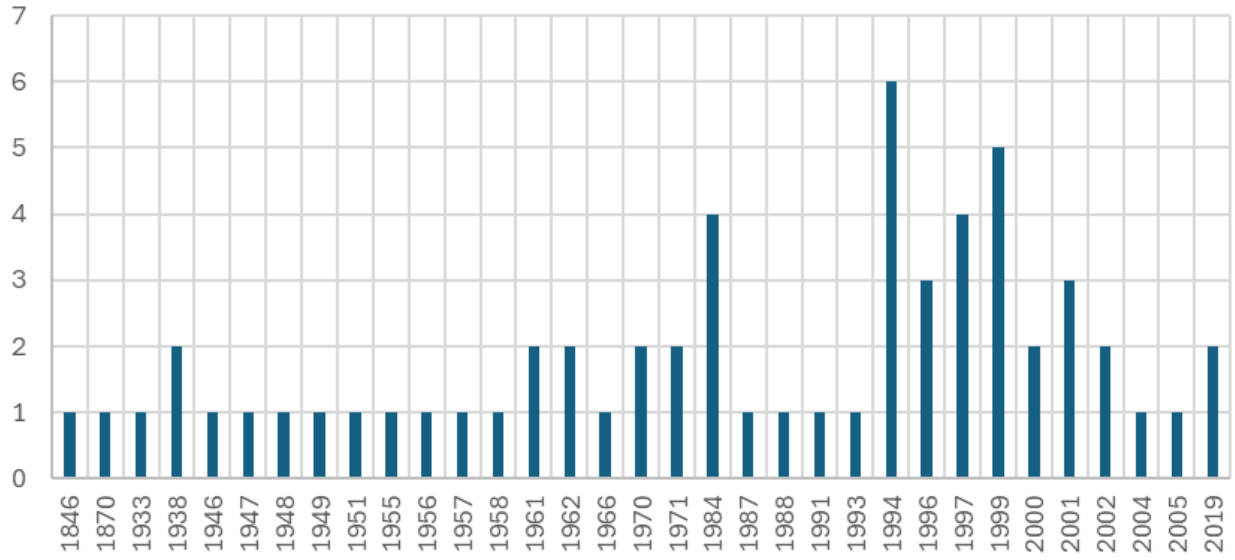



*Figure 5: CQ1. What year was your organization founded?*

Question C1 had 60 responses. Further analysis of the survey data indicates that while many organizations had existed prior to 1990, the vast majority of those were county conservation districts, which were established in Pennsylvania in 1945. The 1990s saw a large uptick in the formation of watershed groups likely due to an increased interest in watershed planning, development of the EPA 319 program, DEP (formerly DER) development of watershed based Comprehensive Mine Reclamation Strategy plans, along with the development of passive treatment technology which provided watershed groups a viable solution to AMD that they could implement. With the passage of Growing Greener additional support to existing and the creation of new watershed groups spurred more watershed groups which significantly dropped off after 2005.

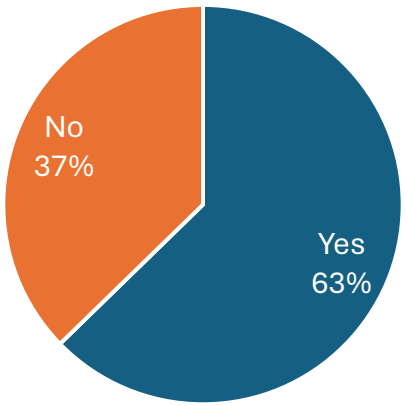



*Figure 6: CQ2. Is your organization incorporated?*

Question C2 had 59 responses. A majority of the organizations are incorporated, which may suggest a formalized structure and potential eligibility for certain funding or partnerships (Figure 6).

The incorporation years are diverse, with some organizations incorporated as early as 1933 and others as recent as 2020. The most common Incorporation years are 1997 and 2002 with 4 organizations each.

The varied incorporation dates indicate a continued effort to formalize organizational structures over time. Question C3 only had 31 responses (Figure7).

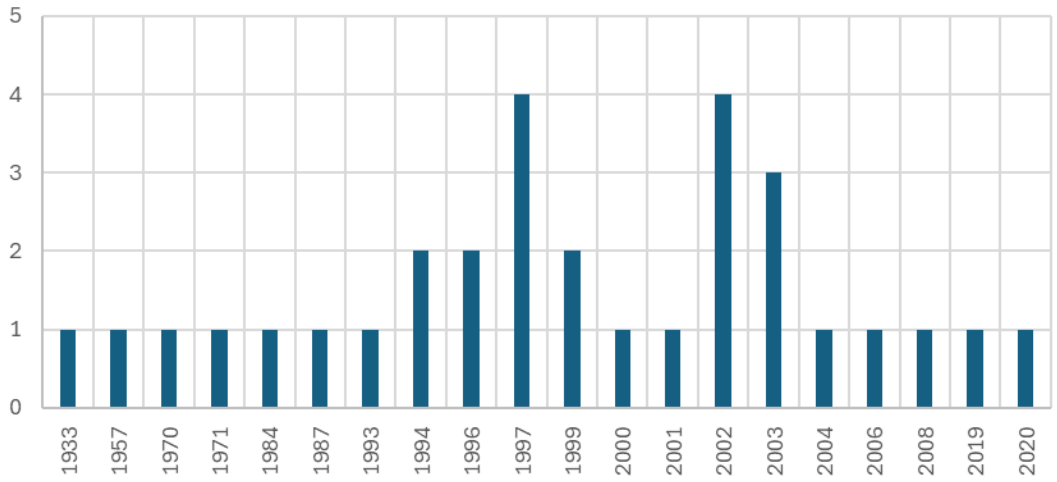



*Figure 7: CQ3. If incorporated, what year?*

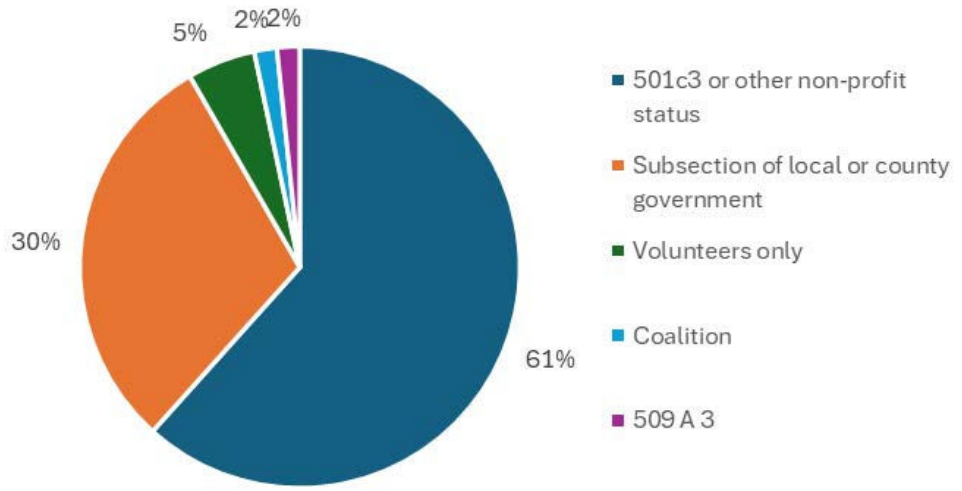



*Figure 8: CQ4. What is your organizational structure?*

A significant number of organizations operate under a 501c3 or non-profit status, indicating a focus on public service and eligibility for non-profit benefits and funding. Question C4 had 60 responses (Figure 8).

The majority of organizations have physical office space, which can be an indicator of operational stability and capacity for in-person coordination. Question C5 had 62 responses (Figure 9).

Understanding the founding years, incorporation status, and organizational structures can help identify potential areas for collaboration, funding opportunities, and capacity building. The data can guide targeted support for newer organizations or those lacking formal structures.

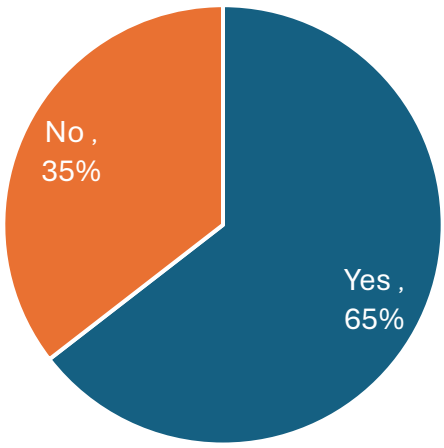



*Figure 9: CQ5. Does your organization have physical office space?*

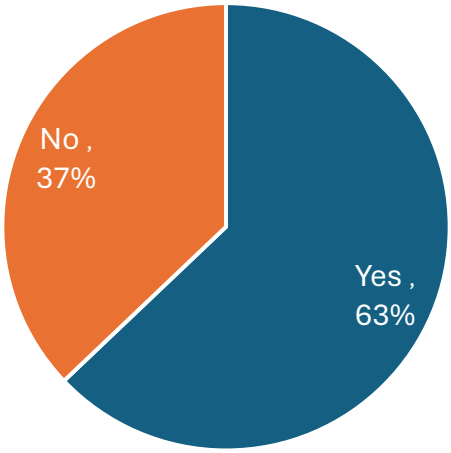



*Figure 10: CQ6. Does your organization have any paid staff?*

The following questions asked about paid staff and volunteers. Over half of the organizations have paid staff, suggesting a level of financial stability and the capacity for more consistent project management and operations. Question C6 had 62 responses (Figure 10).

A follow up question was asked of those respondents (36) with paid staff to find out how many. Responses to Question C7 range from 1 to 350, with the most common numbers being around 1-10 paid staff members. The majority of organizations with paid staff have fewer than 10 employees, indicating smaller, possibly grassroots-level operations.

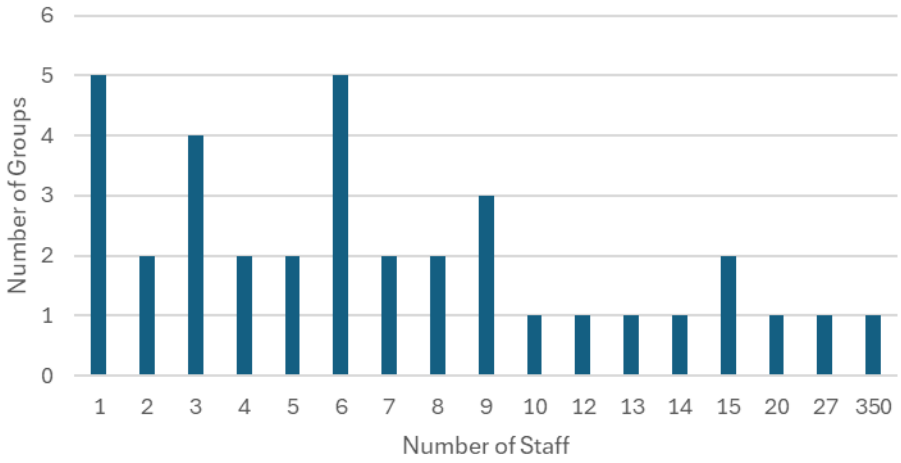



*Figure 11: CQ7. If paid staff, how many?*

A high number of organizations report having active volunteers, highlighting the importance of volunteer contributions to conservation efforts. Question C8 had 62 responses (Figure 12).

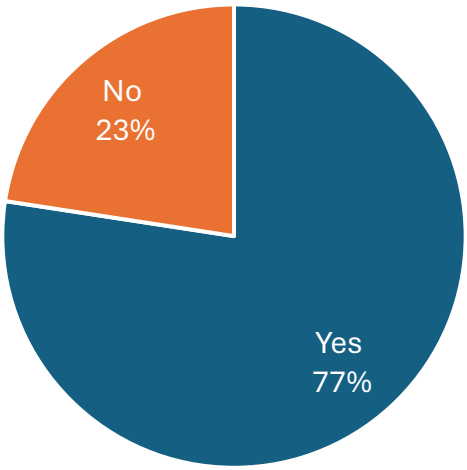



*Figure 12: CQ8. Does your organization have active volunteers?*

A follow up question was asked of those respondents (36) with active volunteers to find out how many. Responses to Question C9 range from 1 to 2,500, with the most common numbers being around 10-12 active volunteers. The high standard deviation indicates significant variability in volunteer numbers, from many very small to a few large-scale volunteer engagement.

The significant number of active volunteers highlights the community-driven nature of these organizations.

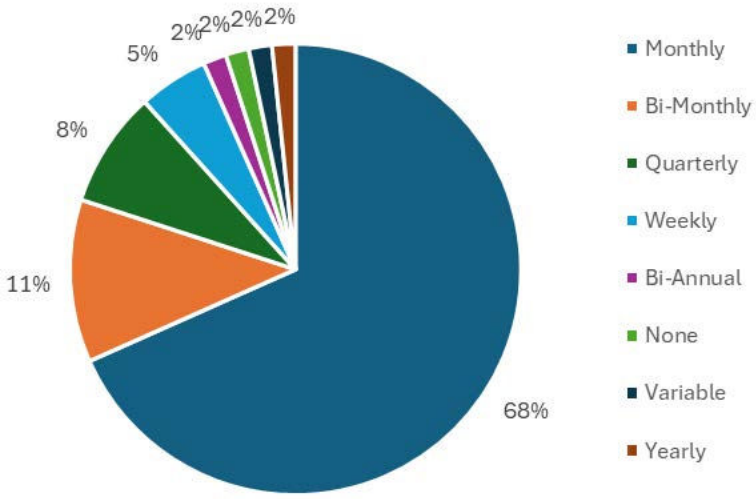



*Figure 13: CQ10. How often does your organization have meetings?*

Most organizations meet monthly, indicating regular coordination and planning efforts. Question C10 had 62 responses (Figure 13).

Next respondents were asked where organizational meetings are held in question C11 (Figure 14). The use of various meeting spaces, including virtual, suggests flexibility in meeting logistics and resource availability. In a follow up question approximately 10% responded they held virtual meetings as well.

The final question in this section, C12, asked "How many members or participants typically attend organizational meetings?" The majority of organizations have a moderate attendance of 5-15 participants, indicating engaged but small to medium-sized groups (Figure 15).

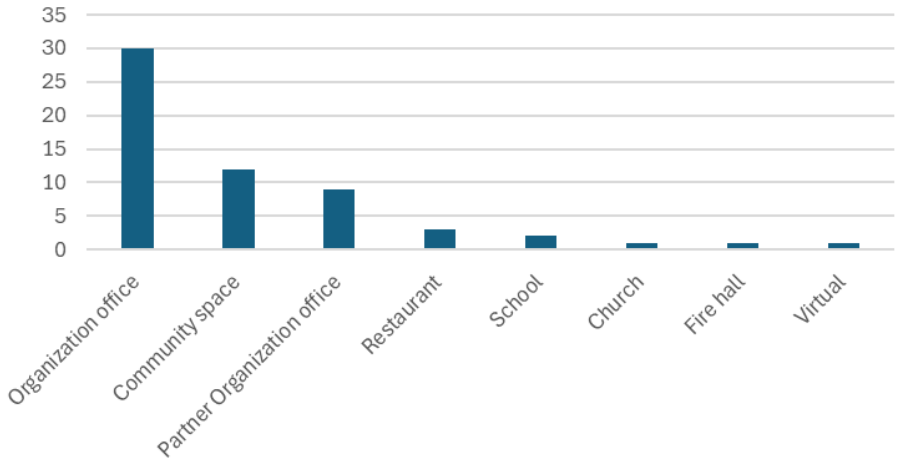



*Figure 15: CQ11. Where are your organizational meetings held?*

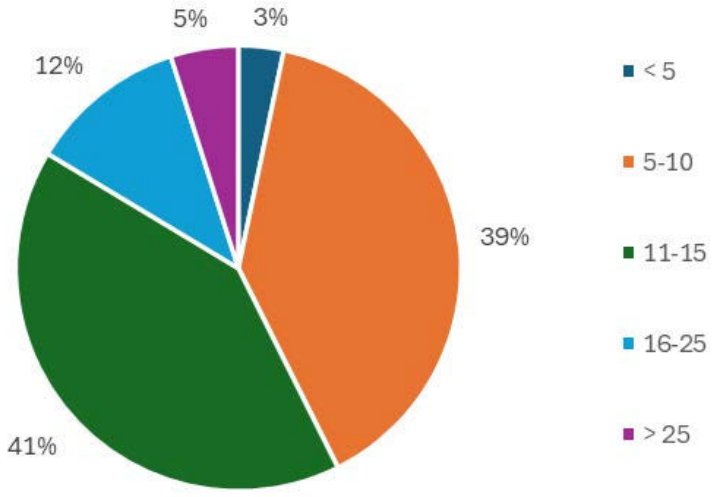



*Figure 14: CQ12. How many members/participants typically attend your meetings?*

***D. Financial Management***

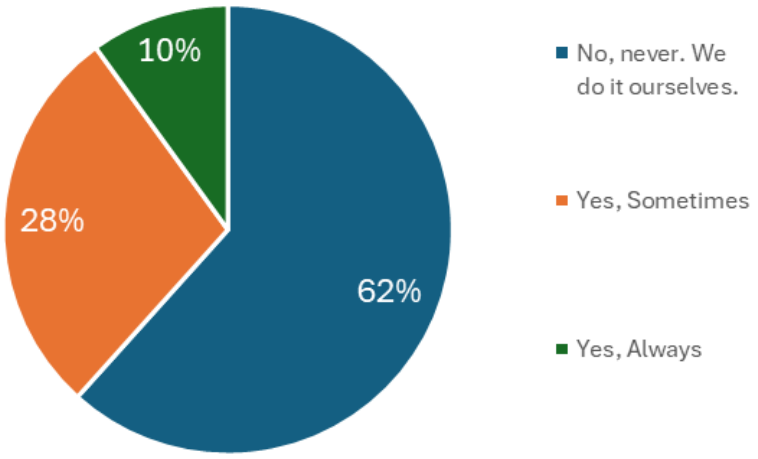



*Figure 16: DQ1. Does your organization ever use a fiscal sponsor to obtain and administer grants on your behalf?*

Question D1 had 60 responses which showed that a majority of organizations manage their grants independently, indicating a level of self-sufficiency in financial management. However, a significant portion also uses fiscal sponsors, suggesting reliance on external support for grant administration. (Figure 16).

A follow up question D2 asked "If you do use a fiscal sponsor, what are the reasons why?" but answers were provided for this question.

The majority of organizations file an annual IRS 990 or tax return, indicating compliance with financial reporting requirements. However, a notable portion does not file, possibly due to exemptions or lack of formalization. Question D3 had 60 responses (Figure 17).

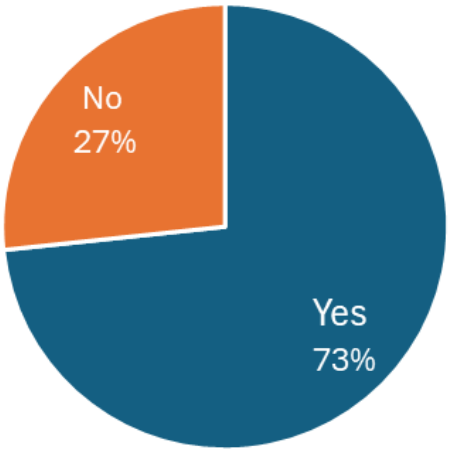



*Figure 17: DQ3. Does your organization file an annual IRS 990 or file a tax return?*

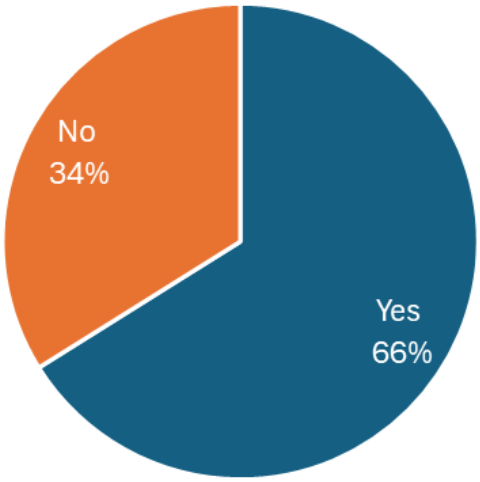



*Figure 18: DQ4. Does your organization do annual budgeting?*

Most organizations engage in annual budgeting, which is critical for financial planning and resource allocation. The absence of budgeting in some organizations may indicate a need for capacity building in financial management practices. Question D4 had 59 responses (Figure 18).

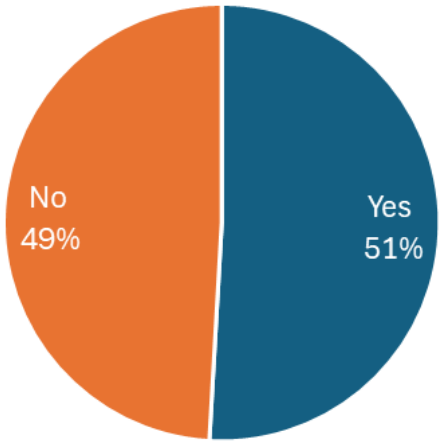



*Figure 19: DQ5. Has your organization ever had a line of credit with a bank?*

A nearly equal split between organizations with and without lines of credit suggests varied financial strategies and access to financial services. Question D5 had 55 responses (Figure 19). Those with lines of credit may have more flexibility in managing cash flow and funding gaps.

While most organizations conduct annual budgeting, a smaller proportion has access to lines of credit, indicating varied levels of financial capacity and planning.

Survey results found most organizations employ a bookkeeper or accountant, indicating a largely structured approach to financial management among CWOs. The prevalence of employed financial managers among CWOs could mean there is accurate financial reporting and compliance. Question D6 had 60 responses (Figure 20)

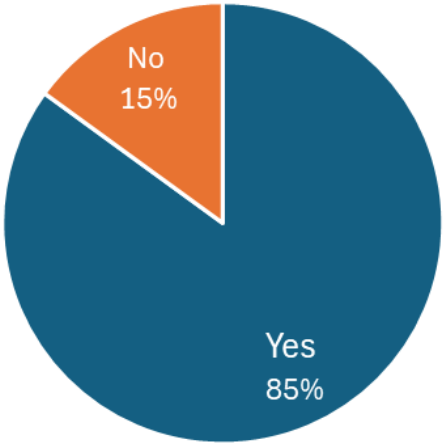



*Figure 20: DQ6. Does your organization have a bookkeeper/accountant?*

As a follow up question D7 asks if the bookkeeper is paid or volunteer. A decent percentage of CWOs had paid bookkeepers (58%), with 38% being professional. Question D6 had 64 responses (Figure 21). The reliance on paid professionals or staff for bookkeeping suggests considerable investment in accurate financial management. Volunteer bookkeepers are also present, indicating some reliance on community support.

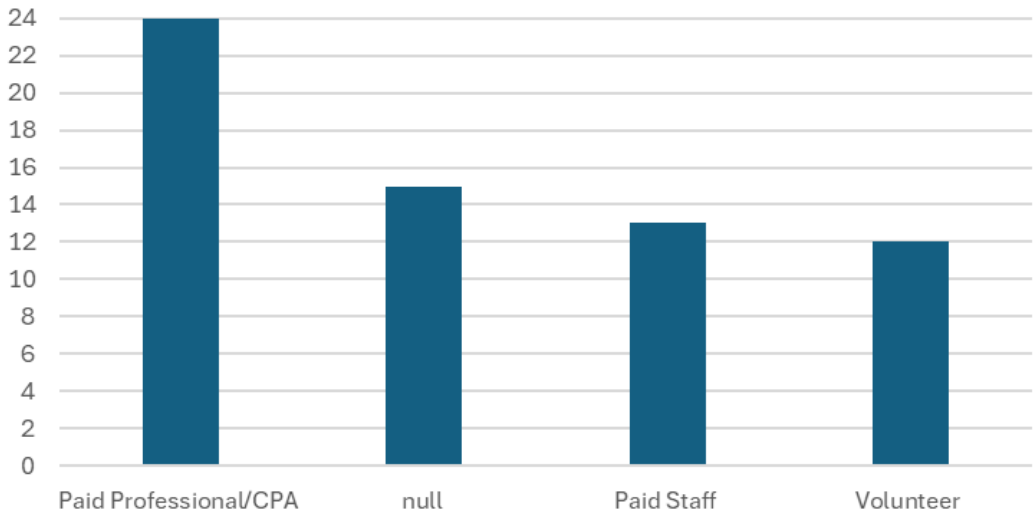



*Figure 21: DQ7. If bookkeeper, paid or volunteer?*

A majority of organizations involved in the study (68%) have undergone audits, demonstrating a commitment to transparency and accountability. Those that have not may be smaller organizations or those not requiring audits under regulatory thresholds. Question D6 had 57 responses (Figure 22). A follow up question D9 asked if audited what type? There were no responses to this question.

The employment of bookkeepers or accountants, mostly paid, underscores the importance placed on accurate financial management. The prevalence of audits further highlights a commitment to financial transparency.

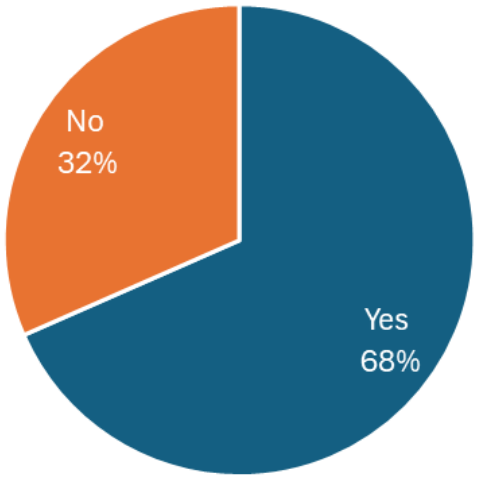



*Figure 22: DQ8. Has your organization ever had an audit?*

***E. Insurance and Policy Compliance***

Question E1 asked "What types of policies does your organization use to limit the possibility of fraud?"

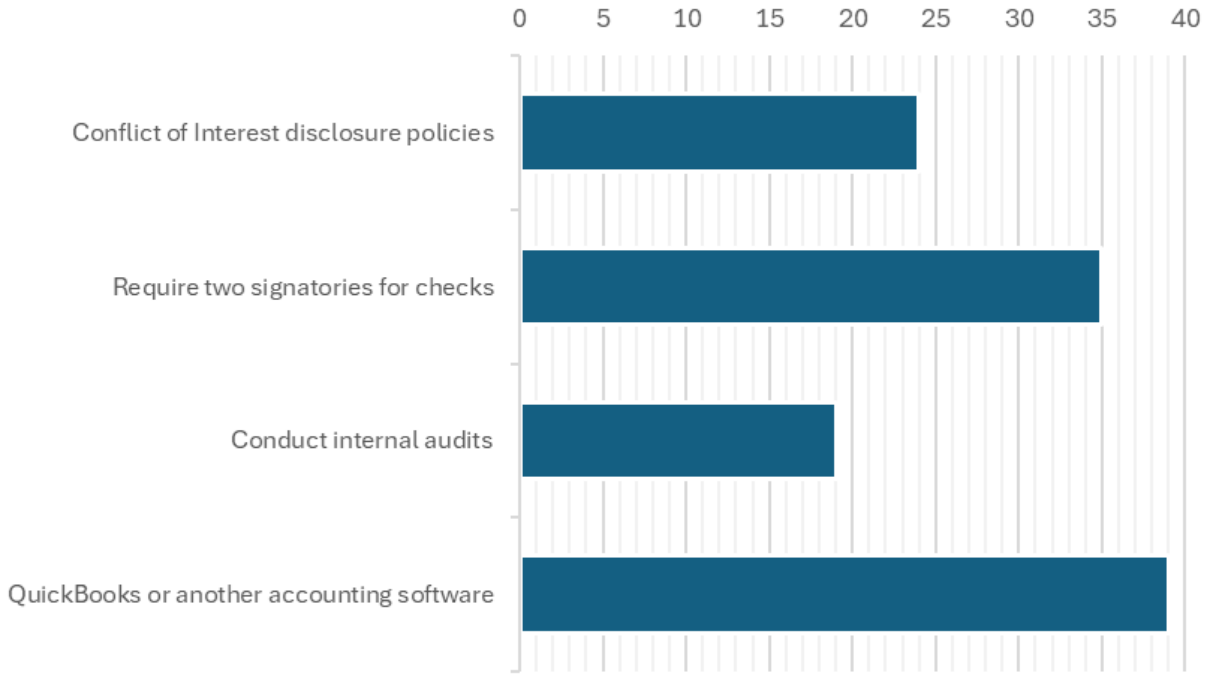



*Figure 23: EQ1. What types of policies does your organization use to limit the possibility of fraud? (Check all that apply)*

There was an option to choose "No policies", but no one chose the answer. This indicates that all responding organizations have some form of financial control policies in place, suggesting a commitment to preventing fraud (Figure 23).

The question also gave the respondent the opportunity to provide additional write-in answers which are summarized below.

Other financial control measures mentioned:

- We are part of another organization. I don't know if they have a policy
- Separation of duties: Ex. one person gets the mail, another processes payments, and another opens and distributes it so that all mail is seen by at least 2 individuals.
- Annual accountant's review
- CPA and elected local auditor audits
- Multiple signatures on research proposals and spending
- Outside Auditors
- 2 CFR 200 Compliance Documents
- Not sure

The diversity of responses and write-in answers in "other measures" indicates tailored approaches to financial controls, adapting to the specific needs and structures of different organizations.

The next question asked "What type of insurance does your organization have?" A small number of organizations operate without insurance, which could pose significant risks. General Liability insurance is common, providing broad coverage for potential liabilities (Figure 24).

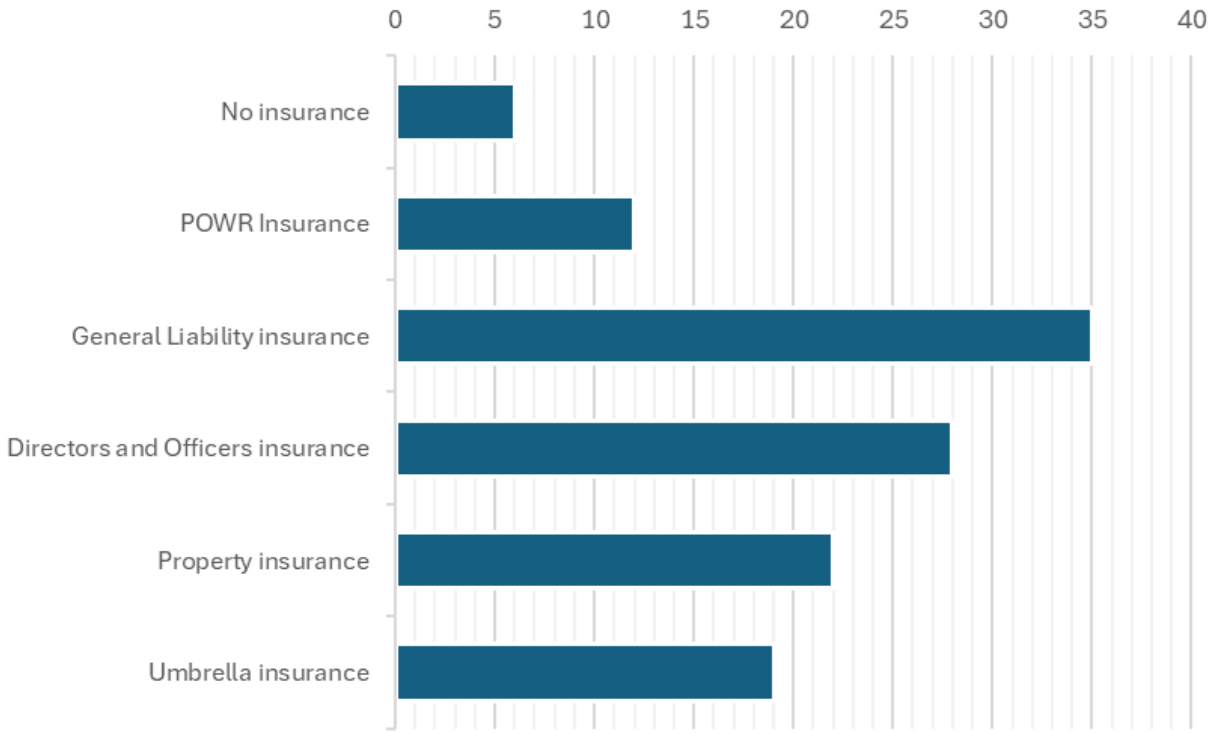



*Figure 24: EQ2. What type of insurance does your organization have? (Check all that apply)*

Directors and Officers insurance is also prevalent, protecting leadership from personal losses due to organizational policy issues. Property insurance is moderately common, indicating that many organizations have assets requiring protection. Umbrella insurance provides additional liability coverage, reflecting a risk management approach. POWR Insurance is not widely used, suggesting either limited awareness or availability.

Other types of insurance from the write-in section:

- Commercial auto
- We are covered by another organization
- Errors and omissions insurance
- Inland Marine
- Cyber
- Pesticide applicator
- Unsure

These specialized insurance types indicate awareness and preparation for specific risks associated with the organizations' activities.

When asked about procurement policies, a notable number of organizations lack formal procurement policies. This could potentially increase risks associated with purchasing and contracting (Figure 25).

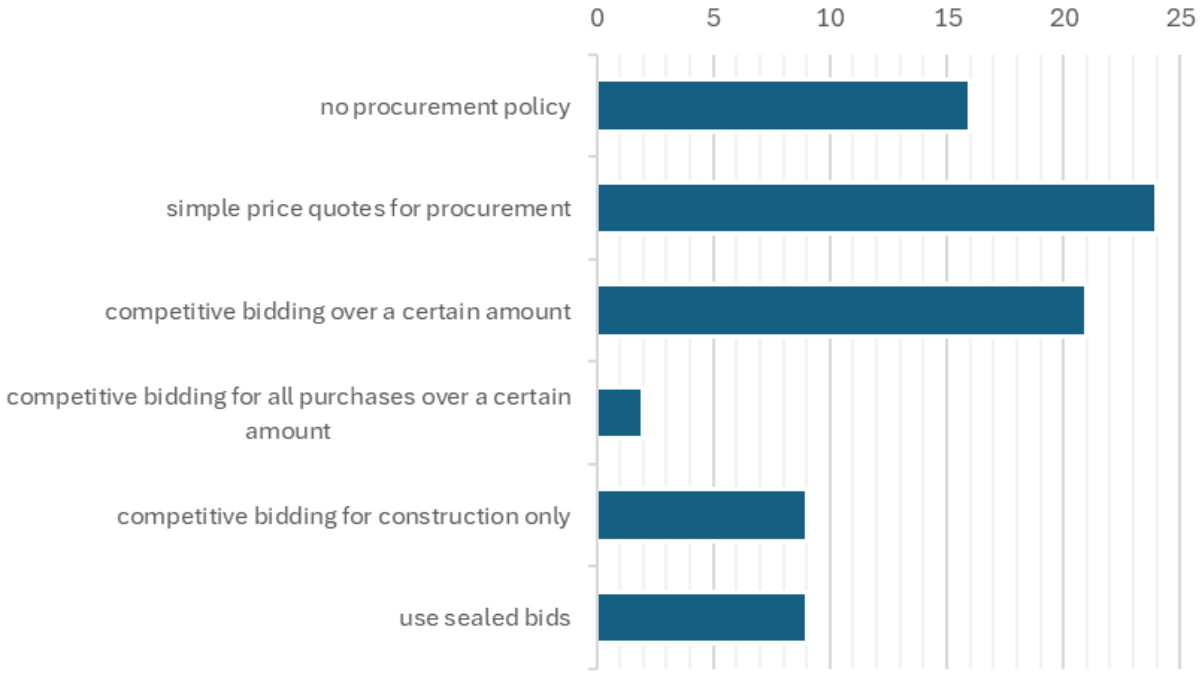



*Figure 25: EQ3. Does your organization have procurement policies in place? (Check all that apply)*

Simple price quotes are commonly used, indicating a straightforward approach to procurement. Competitive bidding for significant purchases suggests an effort to ensure value for money and fairness in the procurement process. Only a few organizations apply competitive bidding to all purchases, indicating varying thresholds for this practice. The use of sealed bids, while not widespread, indicates a preference for confidentiality and impartiality in the procurement process.

Other procurement policies from the write-in section:

- Depends on the situation
- Competitive and sealed anonymous bidding
- Follow PA second class township code
- Bidding on grant amount which require it
- Follow County code

The variety of procurement policies reflects different organizational needs and regulatory environments.

The data reveals a diversity of approaches to financial and policy compliance, reflecting the varied structures and operational contexts of the organizations. Tailored support and resources can help standardize best practices across the sector. Organizations lacking in specific areas, such as insurance coverage or procurement policies, represent opportunities for capacity building. Training and resources in these areas could enhance overall organizational resilience and compliance.

***F. Abandoned Mine Reclamation (AMR) Projects***

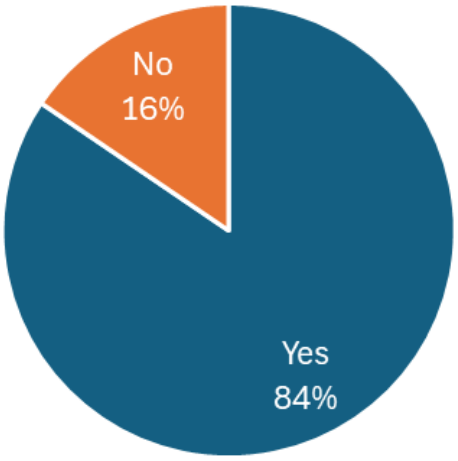



*Figure 26:FQ1. Is your organization addressing abandoned mine issues?*

Question F1 had 58 responses, with the majority (84%) involved in addressing abandoned mine issues. This was to be expected as our target pool for survey respondents involved groups, conservation districts, organizations, etc. who have been concerned with AMR work in the past. This shows a strong commitment to environmental restoration and remediation in areas affected by mining among our pool of respondents (Figure 26).

There were 52 responses to Question F2. The data shows a range of grant acquisition, with many organizations securing multiple grants. This suggests varying levels of experience and success in securing funding for AMR projects. Notably, 27% of respondents answered that their organization had received 20 or more grants, indicating great commitment to AMR projects (Figure 27).

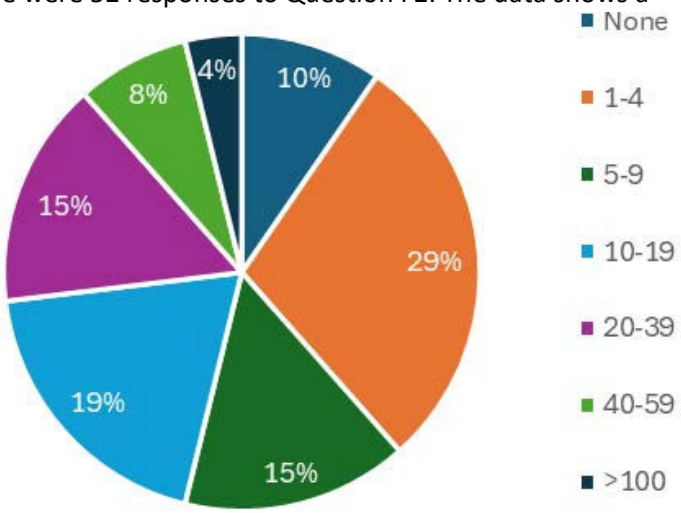
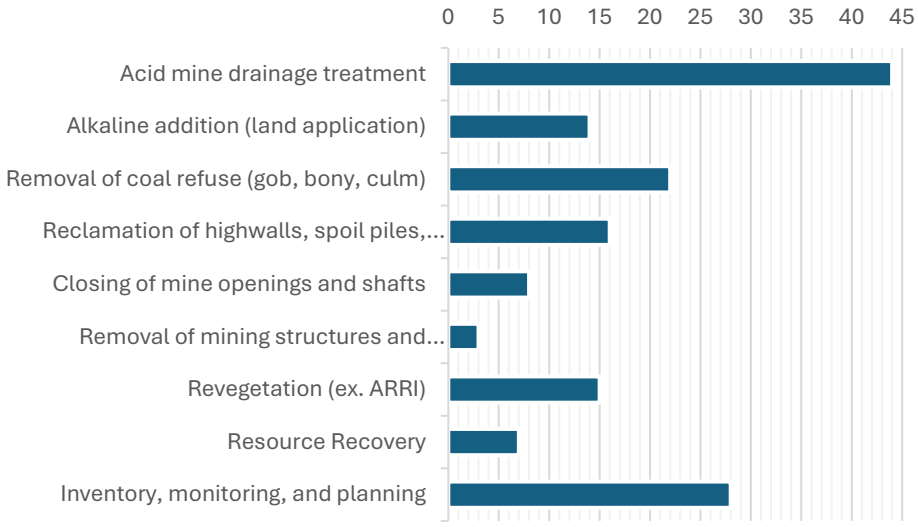



*Figure 27: FQ 2. Approximately, how many grants for AMR projects has your organization received since you formed?*




For Question F3, AMD treatment was the most common project type (44 responses), highlighting its priority in remediation efforts. However, the variety of other project types indicates a broad scope of projects tailored to other AMR/AML needs (Figure 28).

*Figure 28:FQ 3. What types of AMR projects has your organization participated in?*

The multiple-choice answers also included “Addressing mine fires” but no organizations reported addressing mine fires, which may reflect either a lack of this specific issue in their areas or resource limitations.

Other project types from the write-in section:

- Treatment system reconstruction
- Educational, administrative
- Technical Assistance
- Maintenance and rehabilitation of existing systems
- Sampling
- GIS analysis of abandoned mine lands
- Not sure

The variety of other project types indicates a broad scope of activities and specialized interventions tailored to specific environmental and community needs.

The inclusion of specialized activities like GIS analysis and educational projects highlights the multi-faceted approach required for effective AMR efforts. These projects not only address immediate environmental issues but also contribute to long-term sustainability and community awareness.

The emphasis on acid mine drainage treatment and coal refuse removal reflects the critical environmental challenges posed by abandoned mine lands. These projects are essential for improving water quality and land safety.

The variation in the number of grants received suggests differences in organizational capacity and resources. Organizations with more grants may have greater capacity for larger or more complex projects.

### *G. Operation Maintenance and Repair (OM&R) of AMD Treatment Systems*

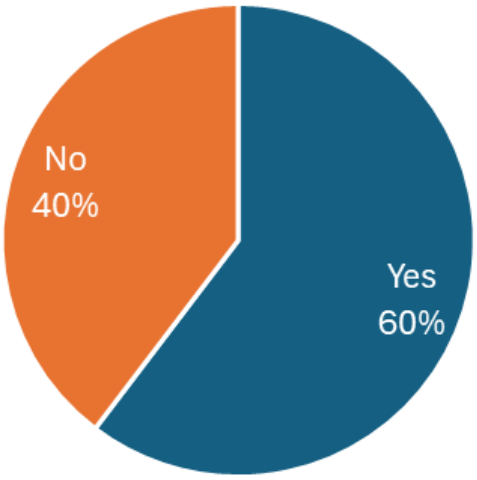



*Figure 29:GQ1. Is your organization operating and maintaining AMD treatment systems you have constructed?*

Based on the 58 responses to Question G1, a considerable portion (60%) of the responding organizations operate and maintain their AMD treatment systems (Figure 29). This reflects an active engagement and widespread commitment in ongoing management of systems which are collectively known and understood to degrade overtime.

Question G2 listed 12 common O&M tasks for AMD treatment systems and asked which ones the organizations could complete. Of the 12 tasks, 7 contained at least 25 respondents selecting that they could be completed by their organization, indicating a level of self-sufficiency among groups.

Tasks that had fewer groups completing on their own included: sludge handling, stirring /washing treatment media, maintaining Agri Drains, and cleaning bar guards likely due to specific technical and equipment needs.

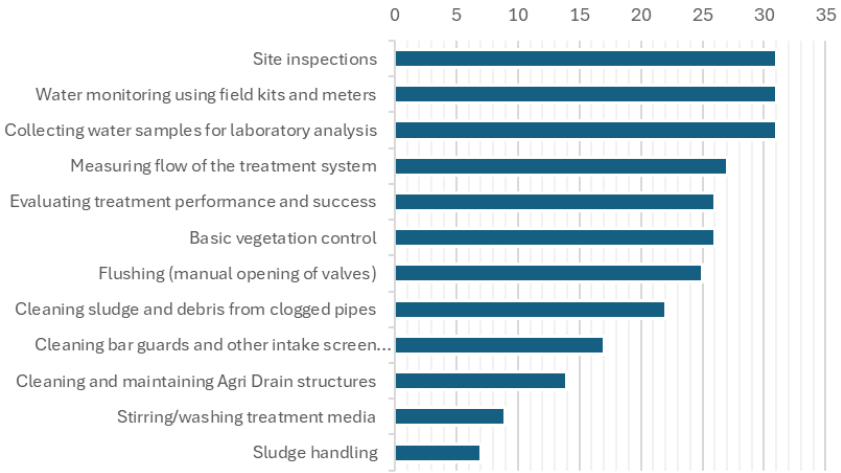



*Figure 30: GQ 2. If so, what O&M tasks can your organization complete on their own? (Check all that apply)*

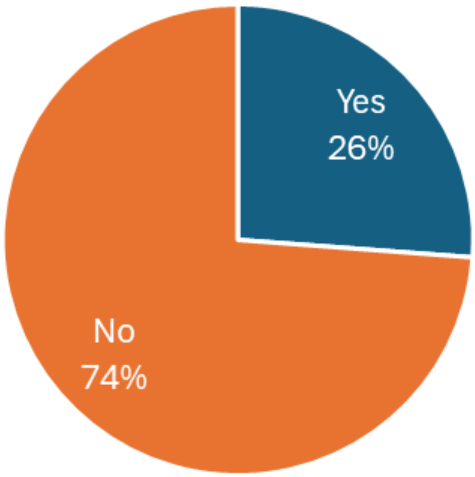



*Figure 31: GQ3. Does your organization have an operation and maintenance fund?*

Question G3 had 42 responses, and data showed that most organizations (74%) do not have a dedicated O&M fund, suggesting potential challenges in sustaining long-term maintenance activities. This result is quite different from Question G1, which found 60% of groups do O&M on their systems, indicating that even though most groups acknowledge the importance and put work into O&M it is still difficult to obtain long-term funds to do so (Figure 31).

Question G4 asked "What challenges does your organization face in the long-term operations and maintenance of your existing projects?" Responses were written and summarized below. See the word cloud (Figure32).

The challenges identified in maintaining long-term operations and maintenance of environmental projects underscore the need for comprehensive support for CWOs. The reliance on aging volunteers and the lack of younger recruits pose a significant threat to the sustainability of these organizations. Addressing this issue requires targeted outreach and engagement strategies to attract a new generation of volunteers.

Funding shortages are a critical barrier, particularly the lack of dedicated O&M funds. Establishing stable funding streams for maintenance activities is crucial to ensure that projects can be sustained over the long term. This includes exploring new funding models, such as endowments or public-private partnerships, to provide a steady flow of resources.

The need for increased administrative and technical expertise highlights the importance of capacity building. Training programs and resources should be made available to enhance the skills of CWO staff and volunteers, particularly in areas such as grant management, financial oversight, and technical maintenance tasks.

Addressing specific project challenges, such as technical issues with treatment systems and the high costs of maintenance, requires specialized support. This could involve creating technical assistance programs or providing access to expert consultants who can help organizations navigate these challenges.

The administrative burden associated with grant management and the complexities of landowner relations and liability issues further complicate the landscape for CWOs. Simplifying grant administration processes and providing policy support to navigate liability concerns are essential steps in supporting these organizations.


*Figure 32: GQ4. What challenges does your organization face in the long-term operations and maintenance of your existing projects*

### *H. Grant Management of AMR Projects*

The 51 responses for Question H1 show about half of the organizations rely on paid staff (53%) for grant writing, with a notable number also depending on volunteers (21%) (Figure 33). This indicates varying levels of internal capacity as well as some reliance on external support.

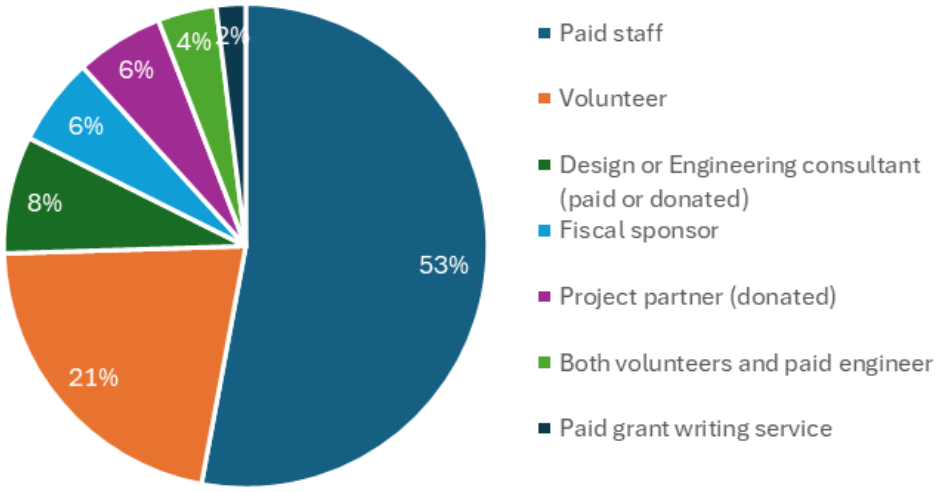



*Figure 33: HQ1. Who typically writes the grants for your organization's AMR projects?*

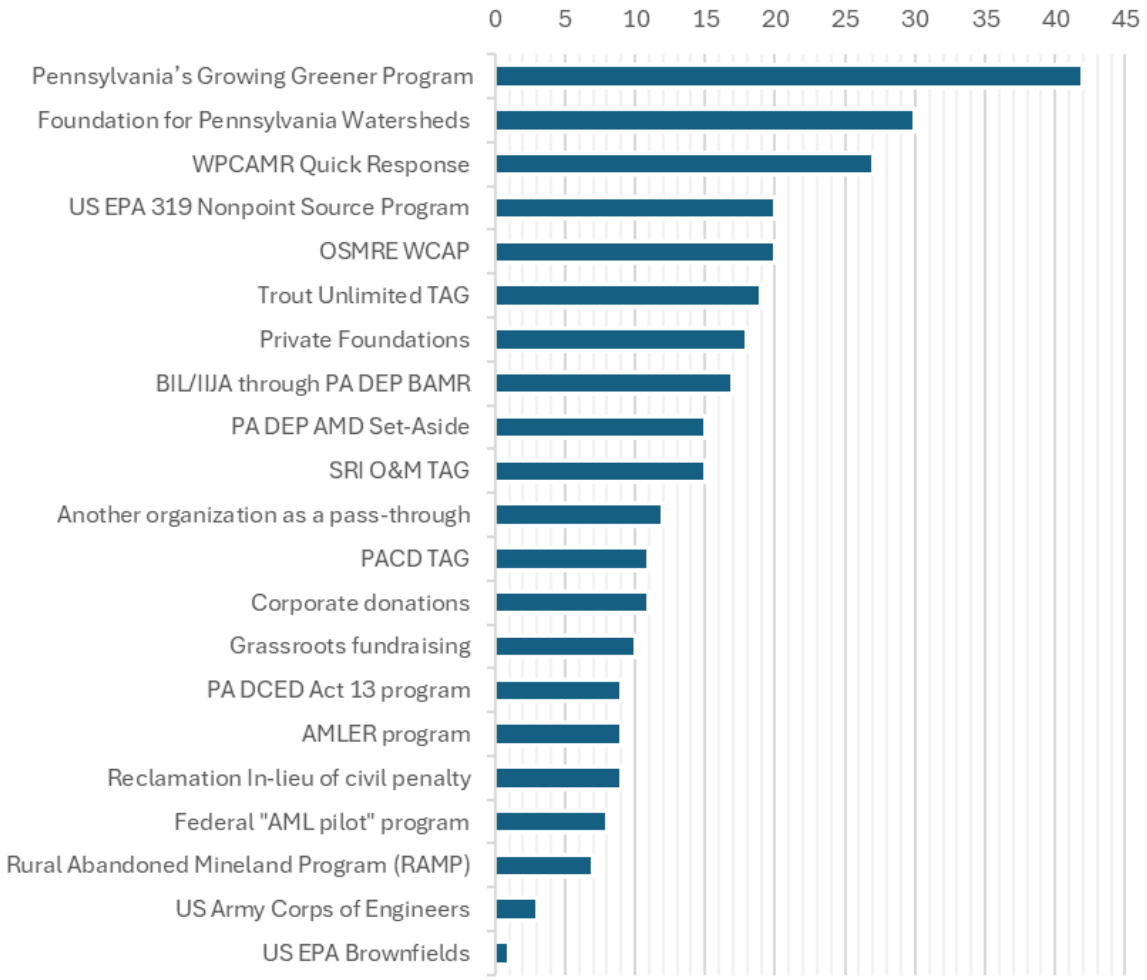



*Figure 34: HQ2. Which funding methods and grant programs has your organization used to complete AMR projects in the past? (Check all that apply)*

Results from Question H2 shows a reliance on a diverse array of funding sources, with state and federal programs playing a significant role (Figure 34). The Growing Greener Grant Program is particularly prominent, indicating strong support at the state level and importance of the program in abandoned mine reclamation since Growing Greener's formation.

Other sources of funding mentioned:

- In-kind services and county funding
- County Commissioners annual grant program
- Natural Resources Conservation Services
- Cooperative work with local Mining and Landfill businesses
- US Fish & Wildlife Service (via National Fish & Wildlife Foundation)
- Self-funded by institutional grants

Several organizations have successfully secured funds from private foundations, indicating a recognition of the importance of diversifying funding sources beyond public grants. Question H3 asked respondents to identify private foundation funds they have used in the past.

Examples of Foundations:

- Richard King Mellon Foundation
- Colcom Foundation
- Degenstein Foundation
- Heinz Endowments

Based on responses to Question H4, organizations are involved in a wide range of project aspects, with water sampling and grant writing being especially common (Figure 35). There is a comprehensive approach taken by these groups, from technical activities to community engagement. In fact, most of the

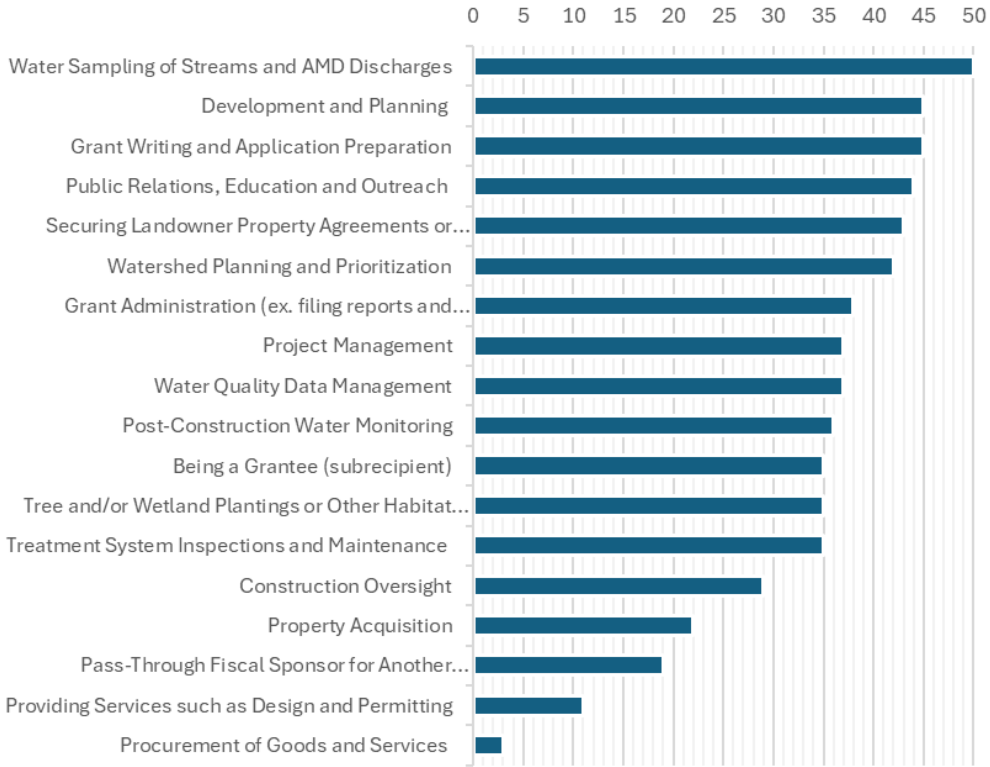



*Figure 35: HQ4. What aspects of projects has your organization participated in the past?*

activities listed had high participation rate with at least 35 respondents saying their organization does. Activities with lower observed participation included construction oversite, property acquisition, serving as a pass-through fiscal sponsor, design/permitting, and procurement.

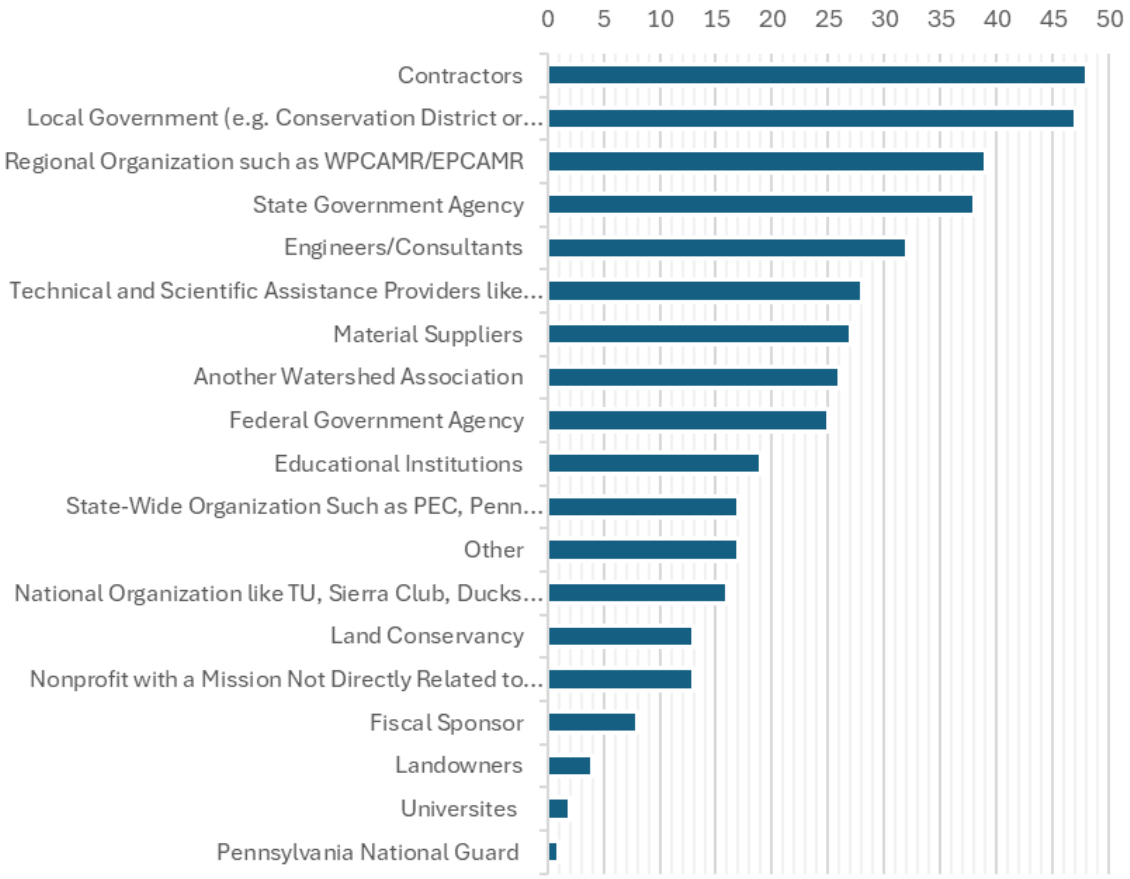



*Figure 36: HQ5. What types of organizations have your organization partnered with to accomplish AMR projects? (Check all that apply)*

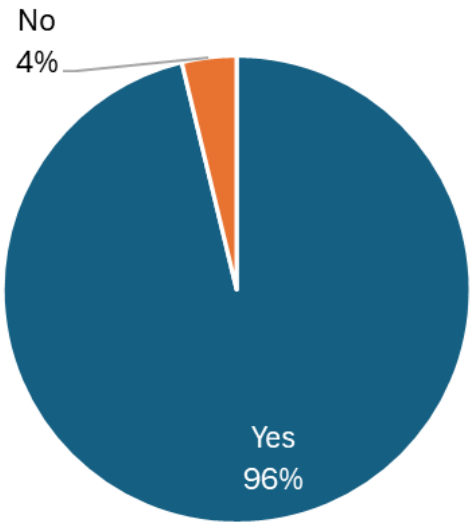



*Figure 37: HQ6. Do you feel that your organization has been successful in completing projects in the past?*

Question H5 inquired about partners in AMR projects, and results indicate top partner types for AMR projects to be local government (county conservation districts, townships, municipality), contractors, regional organizations (WPCAMR, EPCAMR), and state agency (Figure 36). It' clear that groups collaborate with a variety of partners, suggesting that a broad network of relationships is crucial for successful implementation of AMR projects. Those listed in the "Other" category included universities, Pennsylvania National Guard, and landowners.

Question H6 received 51 responses (Figure 37), with the overwhelming majority (96%) stating their organization has

been successful in completing projects in the past. This reflects effective project management and achievement of goals while having pride in their organization's work.

Question H7 asked groups to highlight several critical factors that contribute to the successes and challenges faced by CWOs (Figure 38). The involvement of educational institutions and strategic partnerships emerge as vital components of success, providing essential resources and expertise. These partnerships not only enhance the technical and operational capacity of organizations but also provide valuable networking opportunities and access to funding.


*Figure 38: HQ7. What are the reasons for your successes or challenges?*

However, the heavy reliance on a few dedicated individuals and volunteers underscores a vulnerability in the organizational structure of many CWOs. This reliance can lead to challenges in maintaining project momentum and continuity, particularly if these key individuals are no longer available. The need for a broader base of support, both in terms of human resources and funding, is evident.

The responses also underscore the importance of persistence and adaptability. Organizations that continuously strive to overcome obstacles and adapt to changing circumstances are more likely to achieve their goals. This resilience is crucial in the face of challenges such as regulatory hurdles, funding constraints, and volunteer dynamics.


*Figure 39:HQ 8: What were the biggest challenges that your organization faced in the projects you have completed?*

Similarly, Question H8: "What were the biggest challenges that your organization faced in the projects you have completed?"

Some common challenges were: securing funding and managing fiscal responsibilities, landowner support and permissions, and technical and logistical difficulties in project implementation (Figure 39).

Overall, the responses underscore the need for a comprehensive approach to addressing these challenges. This includes enhancing regulatory support and simplifying permitting processes, securing stable and diversified funding sources, building technical and administrative capacity, and improving community engagement and communication. By addressing these challenges, CWOs can be better equipped to manage and complete their projects effectively, ensuring the long-term sustainability and impact of their efforts in environmental conservation and community stewardship.

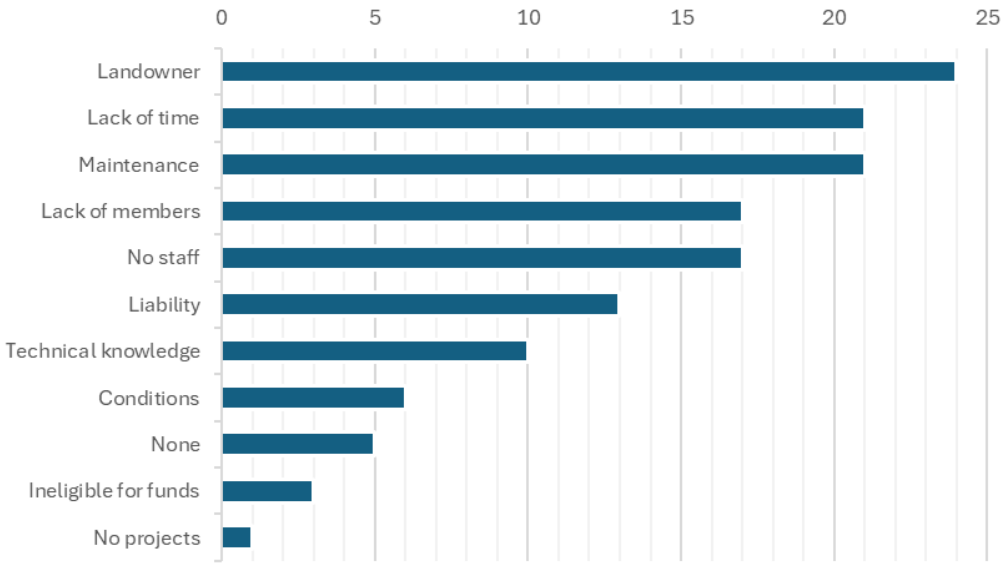



*Figure 40: HQ9. What barriers kept your organization from doing more AMR projects in the past? (Check all that apply)*

Responses to Questions H9 found top barriers in AMR projects involved landowner permissions, lack of time, inability to keep up with ongoing maintenance, and lack of members and staff. Other barriers were experienced as well and likely played a major role in some organizations' success and challenges with projects. Few respondents put "none" as an answer(Figure 40).

Other challenges listed by respondents included:

- Younger members to continue the work
- When a new, organization we found it difficult to be viewed as credible. This is fading but still comes up on occasion.
- Not enough funding to hire more employees and cover general organization and administrative costs
- Lack of administrative support
- Projects too large to administer with our staff
- If more funding had been available earlier we could have completed systems more quickly
- Lack of funding for long-term maintenance
- Organizational capacity, Dedicated Funding for construction and upkeep

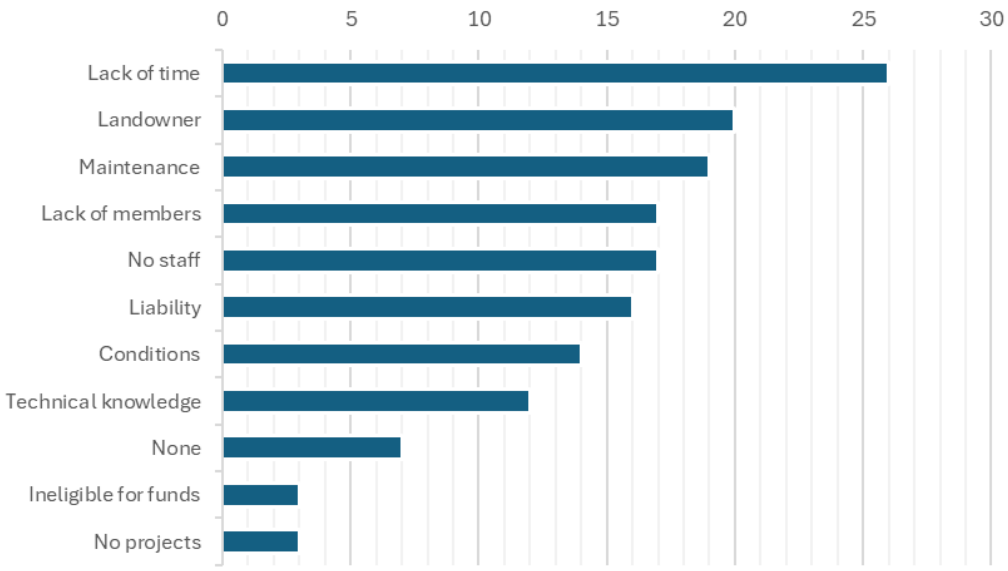



*Figure 41: HQ 10. What barriers are keeping your organization from doing more AMR projects now or in the future? (Check all that apply)*

Question H10 has similar responses as H9, which is expected as this question is the same but referring to the future. However, there appears to be greater weight on the concern for lack of time as compared to the other categories (Figure 41).

Other challenges included:

- Younger members who are interested
- Not enough funding to hire more employees and cover general organization and administrative costs
- Lack of funding
- Organizational capacity, ongoing funding for operation and maintenance
- Retirements of key scientists interested in AMD/AML/watershed issues
- Difficulty in securing financial match for certain grants
- Insufficient funds
- Waiting on some assessments to be completed / not enough staffing capacity to truly capture all of the potential funding for potential projects
- Our organization has a history with environmental restoration, however I don't believe there are any AMD issues in our watershed. We mainly focus on stormwater management. However I think with proper guidance we'd be interested in AMD issues in the years coming.

In summary of this grant management section some strategic focus areas include enhancing staff capacity, securing stable funding sources, and improving landowner engagement are critical for future project expansion. Addressing these challenges can help organizations scale their efforts and increase the impact of AMR projects.

The importance of partnerships, dedicated staff, and effective grant management are key success factors. Organizations that excel in these areas tend to have more successful project outcomes and greater capacity to secure funding.

***I. PA DEP AML/AMD Program***

The 54 responses to question I1 indicated that the majority (85%) of respondents were aware of the AML/AMD Subrecipient Award Program using BIL/IIJA funds (Figure 42). This indicates effective outreach and communication efforts across the AMR community. However, not all respondents were aware, and it's important that groups involved in AMR know about this new grant program as the bulk of the funding towards mine reclamation will be coming from it.

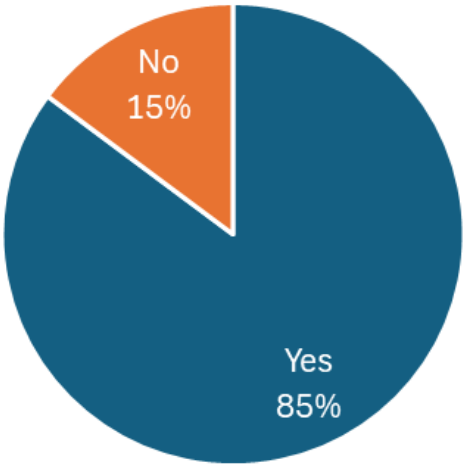



*Figure 42: IQ1. Are you aware that the PA DEP has a new AML/AMD Subrecipient Award Program?*

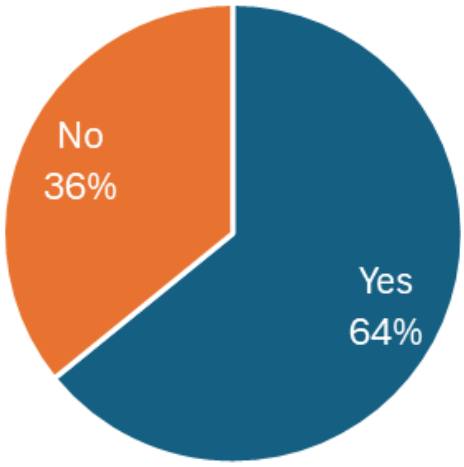



*Figure 43: IQ2. Has your organization considered participation in PA DEP's new AML/AMD subrecipient award program?*

Question I2 had 53 responses, and a smaller percentage of respondents said that they have considered participation in the new AML/AMD Subrecipient Award Program (64%) (Figure 43). This could be due to a range of reasons, but a considerable portion of organizations are considering in participating, reflecting interest in leveraging federal funds for AML/AMD projects.

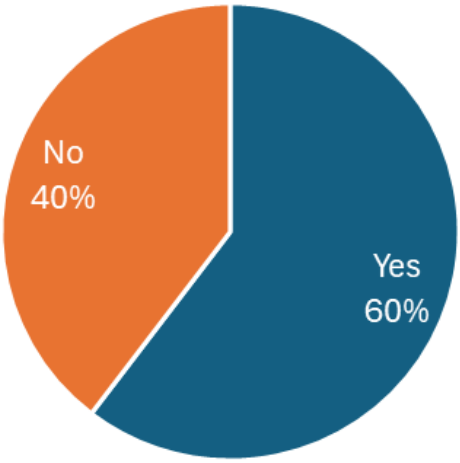



*Figure 44: IQ3. Have you read the eligibility requirements for PA DEP's new AML/AMD subrecipient award program?*

As for Question I3 with 53 responses, a similar percentage responded that they have read the eligibility requirements for the program (Figure 44). However, this is still just at 60%, so a substantial number have not read the requirements indicating a potential need for better communication or education on program's criteria. This also indicates that more organizations may be qualified that is realized as of now.

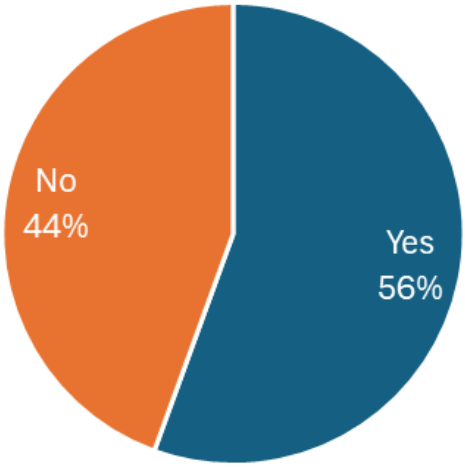



*Figure 45: IQ4. Have you seen any of the presentations about PA DEP's new AML/AMD subrecipient award program?*

Just over half of the 54 respondents to question I4 have seen presentations about the AML/AMD program (Figure 45), suggesting that more outreach efforts could increase awareness and understanding. Since these presentations are

already existing, outreach should involve spreading the word about these presentations and enhancing their availability.

Just over 60% of the 54 respondents to Question I5 have reviewed the federal regulations under 2 CFR 200, regulations which are essential for compliance with federal grant requirements (Figure XX). This is likely new to many organizations involved in AMR work due to the primary reliance on state, foundation, and pass-through organizations' funds, most of which have not used federal funds, prior to the formation of the new AML/AMD grant program (Figure 46). It is essential that groups understand the regulations and how to comply prior to applying for an AML/AMD program grant.

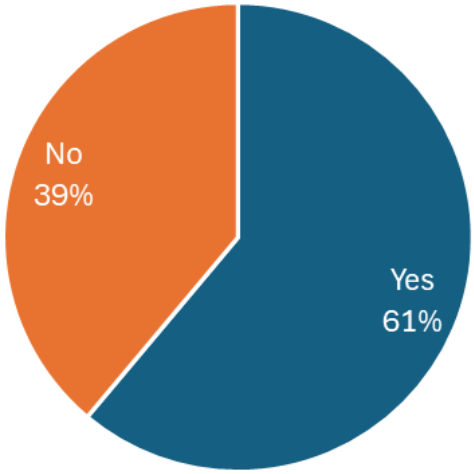



*Figure 46: IQ5. Have you reviewed 2 CFR 200?*

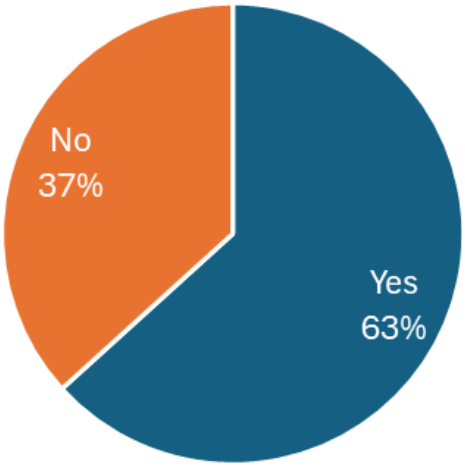



*Figure 47: IQ6. Do you believe your organization has the ability to comply with 2 CFR 200?*

Question I6 received 49 responses, which indicated a moderate level of confidence in meeting federal compliance requirements (63%). Even so, a considerable portion (37%) expressed concerns about compliance to 2 CFR 200 (Figure 47). This doubt experienced by a portion of respondents could prevent organizations from wanting to continue AMR work into the future.

In Question I7, awareness of the Pennsylvania Good Samaritan Act (PA EGSA) is not as high as awareness of the new AML/AMD Subrecipient Program. About 66% of 53 respondents selected that had reviewed the PA EGSA (Figure 48). The result reflects there is some engagement with environmental legislation pertinent to reclamation activities, but outreach is needed to encourage more organizations to apply for legal coverage under the EGSA and to understand protections they are entitled to.

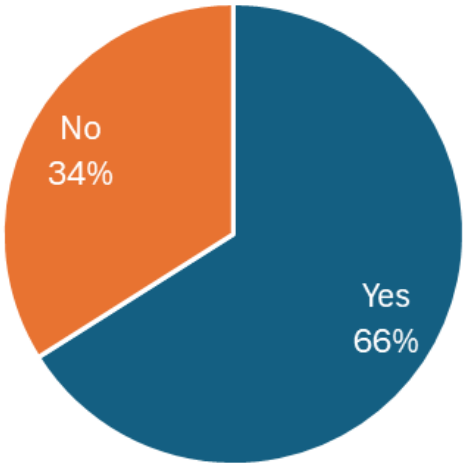



*Figure 48: IQ7. Have you reviewed Pennsylvania's Environmental Good Samaritan Act (EGSA)?*

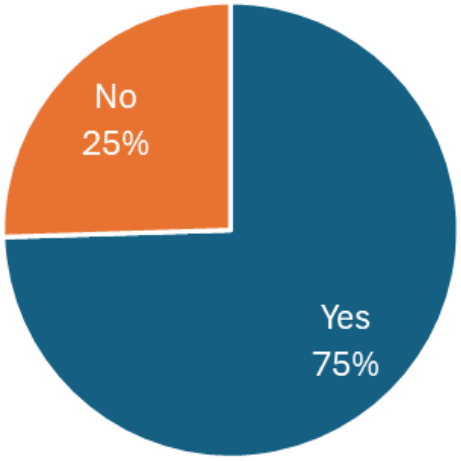



*Figure 49: IQ8. Do you believe your organization has the capacity to become a subrecipient (grantee) for PA DEP's new AML/AMD subrecipient award program?*

A substantial majority of the 51 respondents to Question IQ8 believe they have the capacity to manage subrecipient responsibilities (Figure 49). Some express concerns, particularly around administrative and financial management capabilities. Specific concerns involved being volunteer based, lacking staff, no upfront working capital, long-term O&M, and increased complexity of the program due to compliance with federal regulations. Though difficult to compare due to differences in the number of responses, Question IQ8 contained a greater percentage of positive responses than Question IQ6 which asked about compliance to 2 CFR 200 (Figure 47). This may mean that compliance is a slightly larger concern among CWOs than capacity is, and that compliance challenges are not always directly linked to capacity limitations.

As a follow up to the previous question participants were asked in question I9 if you do not believe your organization can be a subrecipent, what are your major concerns? Responses were captured in a word cloud (Figure 50).


*Figure 50: 9: If not, what are your major concerns?*

Common concerns were capacity issues due to being volunteer-based or lacking staff, financial management and upfront capital for reimbursement-based funding, and complexity, administrative burden of compliance with federal regulations like 2 CFR 200 and concerns over maintaining treatment systems and handling the associated costs and policy responsibilities

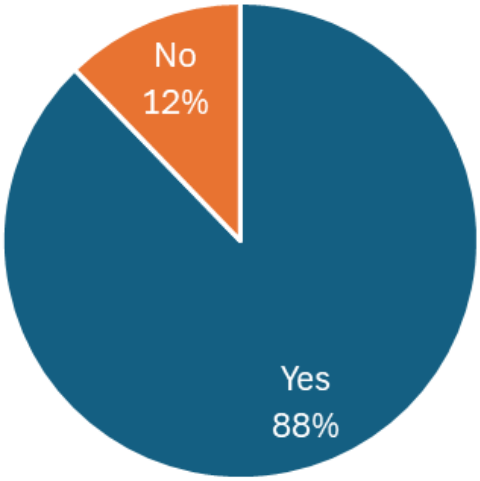



*Figure 51: IQ10. Does your organization want to participate in AML/AMD subrecipient program?*

Question I10 received 49 responses, and results indicate there is strong interest in participating in the new AML/AMD Subrecipient Award Program in the future (Figure 51). This could also suggest that many PA CWO's continue to find AMR work essential in their watershed restoration efforts.

As a follow up to the previous question, top answers to Question I11 showed that many organizations are interested in 1) development/ planning of projects (top answer), 2) being a subrecipient, and 3) grant writing /application preparation in the new AML/AMD program (Figure 52).


*Figure 52: IQ11. If yes, in what ways does your organization want to participate (in the future)?*

In comparison to Question H4 (Figure 35) which asks about aspects of AMR projects completed in the past, the top answers are different. Instead of water sampling ranking as the top answer for H4, it's instead the fourth most popular answer for the new program. However, development and planning and grant writing remained in the top three for both questions. It must be noted that there were 30% fewer responses to this I11 as compared to H4, so it may not be directly comparable.

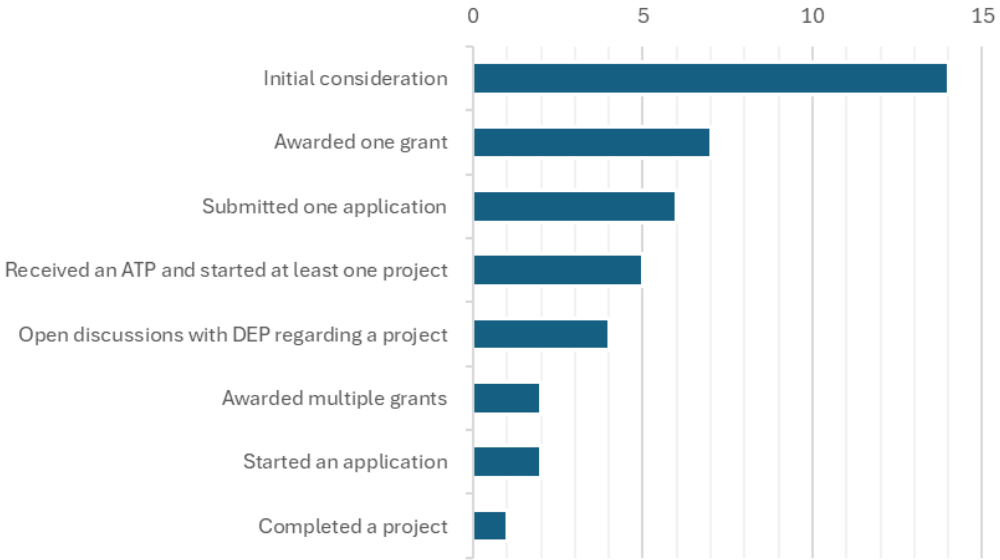



*Figure 53: IQ 12. To what extent has your organization participated in the AML/AMD subrecipient award program?*

Answers to Question I12 show there are 15 respondents that were at least awarded as a subrecipient of the AML/AMD

program (Figure 53). Of those 15 subrecipients, 5 have started their projects and 1 has completed their project. Many other respondents are early in the participation process, with 14 giving the program an initial consideration. This shows that the program is still new, and few have completed a project in its entirety.

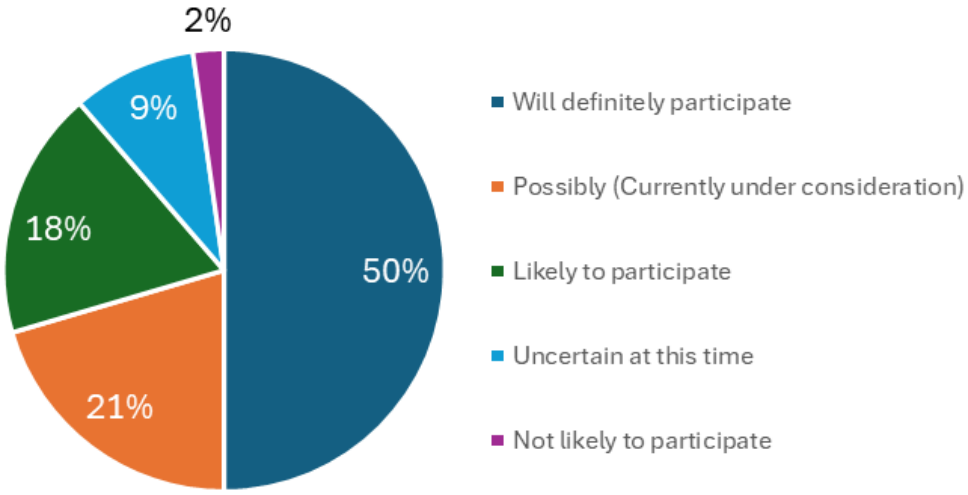



*Figure 54: IQ13. Will your organization utilize the AML/AMD subrecipient program in the next few years?*

Results for Question I13 shows a large fraction of organizations express a high likelihood of participating, though some uncertainty remains. This is likely due to challenges and concerns noted in responses shown previously. About 89% responded positively in regard to participation in the AML/AMD program, with 50% of respondents stating they will definitely participate (Figure 54).

For the following questions participants were allowed to write in their answers. Many of the answers are long and include some personally identifying information. We have made it a point to remove that sort of information from this section to keep answers anonymous.

Question I14 asks "What concerns do you have regarding participation in PA DEP's new AML/AMD BIL/IIJA subrecipient award program?" Responses are summarized in a word cloud (Figure 55).


*Figure 55: IQ14. What concerns do you have regarding participation in PA DEP's new AML/AMD BIL/IIJA subrecipient award program?*

Common concerns were administrative and financial management burdens, compliance with federal requirements (2 CFR 200), Lack of staff or volunteer capacity and complexity and clarity of the program requirements

Question I15 asks "What do you see as the biggest hurdles for your organization to participate in PA DEP's new AML/AMD BIL/IIJA subrecipient award program?" Responses are summarized in a word cloud (Figure 56).

Top hurdles were managing funds and financial responsibilities, compliance with new and complex federal requirements, lack of sufficient staff or volunteers, and funding for upfront project costs and maintenance


*Figure 56: IQ15 What do you see as the biggest hurdles for your organization to participate in PA DEP's new AML/AMD subrecipient award program?*


*Figure 57: IQ16: What gaps in capacity or services hinder your organization's participation in the AMD/AML subrecipient program?*

Question I16 asks "What gaps in capacity or services hinder your organization's participation in the program?" Responses are summarized in a word cloud (Figure 57).

Identified gaps include lawyer representation and insurance needs, financial management and accounting services, lack of specific staff expertise or capacity, and need for clearer guidance and training on federal compliance and program requirements Top services listed in response to Question I17 are #1 free training programs for grant admin, #2 technical assistance, #3 access to free /reduced cost policy advice, and #4 grant writing assistance (Figure 58).


*Figure 58 17. Which of the following services would make it possible for your organization to participate in PA DEP's new AML/AMD subrecipient award program? (Check all that apply)*

The need for other types of services is still present though not as prevalent as the top four. The need for training and technical assistance is prominent, indicating that these resources could significantly enhance organizational capacity and proper understanding to engage with the program.

As a follow up to the previous question, question I18 asks "Are there other services or more specific needs not mentioned above that would help your organization participate in the program?" Responses are summarized in a word cloud (Figure 59).

A summary of responses topics include:

- Increased Funding for Monitoring and Maintenance
- Collaboration with County Conservation Districts
- Engagement of Younger Members
- Uncertainty and Knowledge Gaps
- Staffing Needs
- Insurance and Policy Services
- Grant Management Support
- Streamlined Permitting Processes
- Operational and Maintenance Funds
- Enhanced Communication and Administrative Capacity


*Figure 59: IQ18. Are there other services or more specific needs not mentioned above that would help your organization participate in the program?*

Question I19 asks "What Programmatic and policy changes do you think would make the PA DEP's new AML/AMD subrecipient award program more appealing and manageable for your organization? Responses are summarized in a word cloud (Figure 60).

The responses indicate several critical areas where programmatic and policy changes could enhance the appeal and manageability of the AML/AMD BIL/IIJA subrecipient award program. Key areas


*Figure 60: IQ19. What Programmatic and policy changes do you think would make the PA DEP's new AML/AMD subrecipient award program more appealing and manageable for your organization?*

include simplifying the application process, providing clearer guidance on compliance, increasing DEP staffing, and improving reimbursement procedures. Addressing these concerns could significantly lower the administrative burden on CWOs, making it easier for them to participate in the program and manage projects effectively.

The emphasis on upfront working capital and increased administrative cost coverage reflects broader concerns about financial sustainability and operational capacity. By providing more generous funding terms and support, the program could better align with the financial realities faced by CWOs, particularly those with limited resources.

Enhanced outreach and training are essential for empowering organizations to navigate the complexities of grant management and regulatory compliance. By investing in these areas, DEP can help build a more robust network of CWOs capable of tackling Pennsylvania's environmental challenges.

Overall, these recommendations highlight the need for a more supportive, streamlined, and flexible approach to program administration, which would enable CWOs to maximize their impact in addressing AML and AMD issues.

The final question J1 in the survey asked "Is there anything additional you want to share with us?" Responses are summarized in a word cloud (Figure 61).

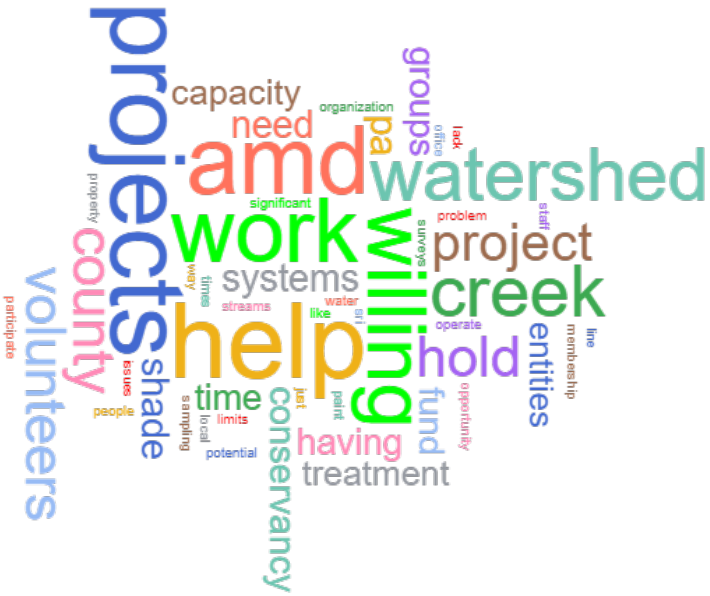



*Figure 61: JQ1. Is there anything additional you want to share with us?*

Themes included:

Partnerships and Collaborative Networks: The feedback underscores the importance of partnerships and collaborative networks in the successful implementation of AMD/AML projects. These relationships provide critical support across various stages of project development and management.

Need for Financial and Administrative Support: The repeated call for assistance with financial management, including budgeting and audits, indicates a gap in internal capacity that could be addressed through training, resources, and possibly shared services among organizations.

Regulatory and Property Management Challenges: The policy and regulatory challenges related to holding property and obtaining necessary permits highlight a need for clearer guidance and possibly policy advocacy to streamline these processes.

Volunteer and Membership Challenges: The difficulty in maintaining and growing volunteer and membership bases points to a need for targeted outreach and engagement strategies, possibly including incentives for participation and broader public awareness campaigns.

Capacity Building: The feedback indicates a critical need for capacity building, both in terms of human resources and organizational infrastructure, to manage the complex requirements of large-scale environmental projects and grants.

***Section 2: Only Watershed Group Respondents***

In this section we were asked to break out only watershed group responses and compare them to all responses.

Question C6 asks "Does your organization have any paid staff?" Responses are summarized in a pie chart (Figure 62).

In comparison to all respondents (Figure 10), it is interesting to see the shift from 63% of CWO with paid staff down to 29% for Watershed Organizations.

A majority of watershed groups do not have paid staff (71%). This suggests that many of these organizations are reliant on volunteer efforts and may have limited resources for sustained operational capacity. Only 29% of organizations report having paid staff, indicating a small portion have the financial capability to support ongoing, professional staffing. This could directly affect their ability to manage complex projects and secure consistent funding, as organizations with paid staff generally have more resources and can handle larger scopes of work.

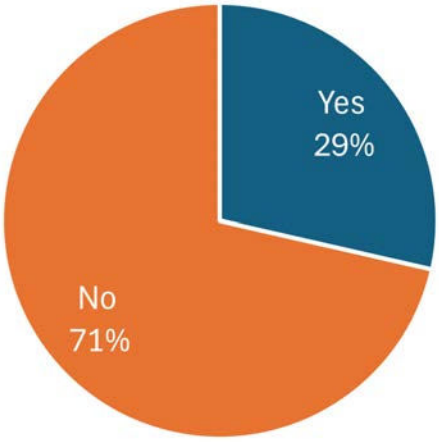



*Figure 62: CQ6(WO). Does your organization have any paid staff?*

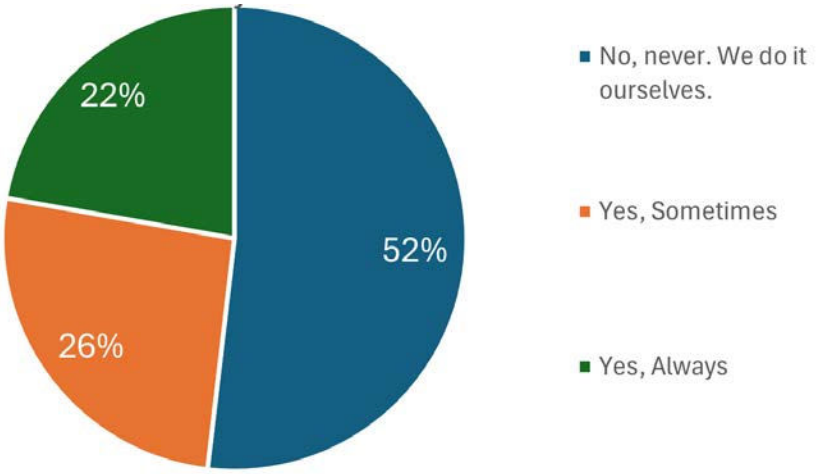



*Figure 63:DQ1(WO). Does your organization ever use a fiscal sponsor to obtain and administer grants on your behalf?*

Question D1 asks "Does your organization ever use a fiscal sponsor to obtain and administer grants on your behalf?" Responses are summarized in a pie chart (Figure 63).

In comparison with (Figure 16) reliance on fiscal sponsors doubles for Watershed Group responses.

Still, the majority of watershed groups prefer to manage their finances and grants independently (52%). A smaller portion (26%) sometimes utilizes a fiscal sponsor, while 22% rely on a sponsor all the time. This shows a strong inclination for self-management, which could indicate confidence in financial management skills for some. However, those using sponsors either frequently or occasionally may have limited internal capacity or wish to mitigate the administrative burden of grant management. Fiscal sponsors can provide critical administrative and financial support to organizations that are otherwise under-resourced.

Question D5 asks “Has your organization ever had a line of credit with a bank?” Responses are summarized in a pie chart (Figure 64).

When compared to all responses (Figure 19), watershed organization responses flip the majority with a line of credit to 59% saying "No".

This could signal a challenge in terms of liquidity and financial flexibility. Having credit access can be crucial for bridging funding gaps, especially for smaller organizations reliant on grants or donations, where funding may be delayed. Without credit, these groups may face delays in project implementation or find it difficult to manage short-term financial needs. Only 41% of watershed groups have access to credit, indicating that financial constraints could be limiting their operations.

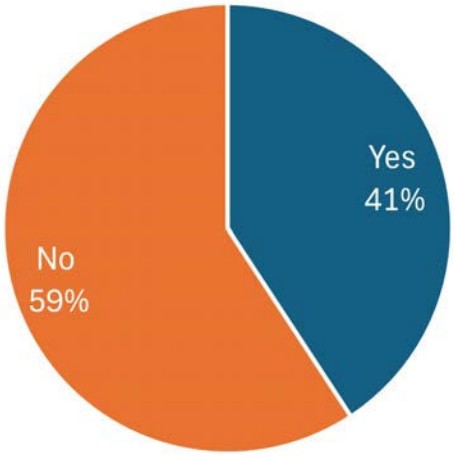



*Figure 64: DQ5(WO). Has your organization ever had a line of credit with a bank?*


*Figure 65: EQ3(WO). Does your organization have procurement policies in place?*

Question D5 asks “Does your organization have procurement policies in place?” Responses are summarized in a bar chart (Figure 64).

As compared to all responses (Figure 25) watershed group responses show a less stable procurement policy than CWOs, but this could be a function of removing responses.

Procurement policies vary significantly among watershed groups. Nearly half (43%) use simple price quotes, a relatively informal method, while 30% use competitive bidding processes. The fact that 21% of groups have no procurement policy at all highlights potential risks related to financial transparency and governance. The varied approaches to procurement reflect differences in organizational capacity, with some groups implementing more rigorous processes, particularly for construction-related projects. Groups with no formal policy may face challenges in ensuring accountability or securing the best value in their purchases.

Question F2 asks "Approximately, how many grants for AMR projects has your organization received since you formed?" Responses are summarized in a pie chart (Figure 66).

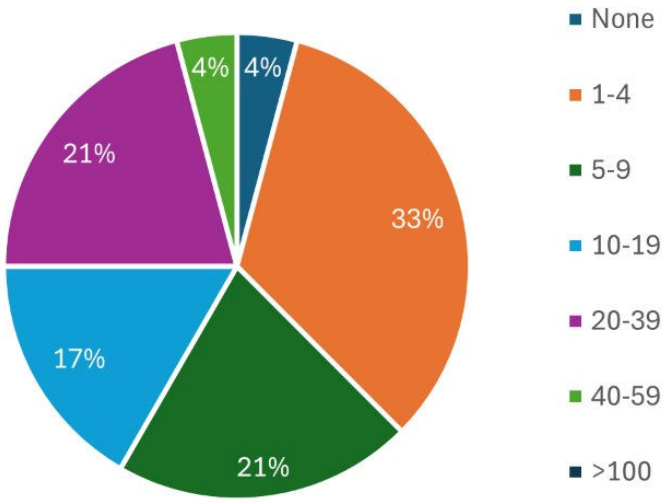



*Figure 67: FQ2(WO). Approximately, how many grants for AMR projects has your organization received since you formed?*

As compared to the full dataset (Figure 27) less watershed groups responded they had "none" and none of the Watershed Groups report "over 100" grants for AMR projects. The difference in the rest are likely a function of percentage redistribution.

The number of AMR grants awarded to watershed groups varies widely. Most organizations have received between 1 and 9 grants, indicating moderate experience in securing AMR funding. Only a few groups have been awarded more than 10 grants, suggesting that the ability to secure larger or more numerous grants is concentrated within a small subset of well-established organizations. Those that have received fewer grants may benefit from capacity-building efforts in grant writing and management to increase their participation in AMR projects.

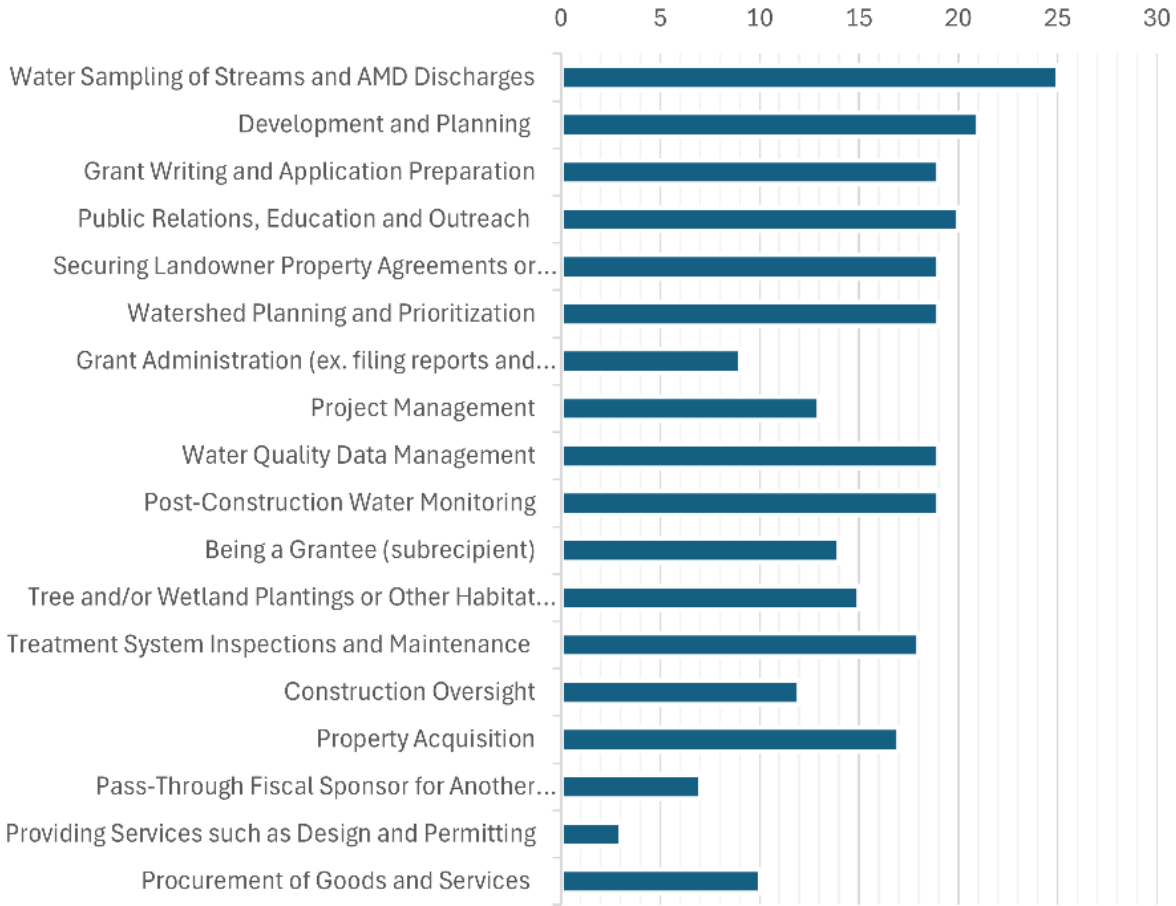



*Figure 66: HQ4(WO). What aspects of projects has your organization participated in the past?*

Question H4 asks "What aspects of projects has your organization participated in the past?" Responses are summarized in a pie chart (Figure 67).

In comparison to all responses (Figure 35), Water sampling and plan development remain the top 2 while Public Relations takes 3rd over grant writing. This makes sense when comparing other Watershed Group responses in this section. For example, less paid staff leads to less grant writing (a specialized task).

The data shows that watershed groups are heavily involved in a wide range of project activities. Nearly half of the organizations participate in watershed planning, project development, and water sampling. Securing landowner agreements and property acquisition, however, appear to be more challenging, with slightly fewer groups involved in these activities. The high level of participation in planning and water sampling highlights the technical expertise and commitment of these organizations, though their ability to navigate complex property issues may be limited. Grant writing is also a key focus for many groups, reflecting the ongoing need to secure funding for project execution.

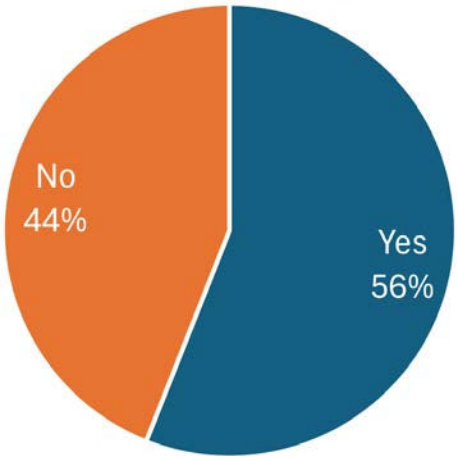



*Figure 68: IQ6(WO). Do you believe your organization has the ability to comply with 2 CFR 200?*

Question I6 asks "Do you believe your organization has the ability to comply with 2 CFR 200?" Responses are summarized in a pie chart (Figure 68).

In comparison to all data (Figure 47) Watershed Groups show a little (10%) less confidence in compliance with 2 CFR 200.

Organizations are nearly evenly split between those that believe they can comply with the federal regulation 2 CFR 200 and those that are unsure or unable to do so. This regulation governs federal grant management, and compliance can be complex, particularly for smaller, volunteer-driven organizations. For those not confident in their ability to comply, providing training or administrative support could be vital for increasing their participation in federal grant programs. The fact that many groups are unsure about compliance indicates a need for clearer guidance or resources to help them navigate these requirements.

Question I8 asks "Do you believe your organization has the capacity to become a subrecipient (grantee) for PA DEP's new AML/AMD subrecipient award program?

As compared to all responses (Figure 49), Watershed Groups have a little (3%) less confidence in their capacity to become a subrecipient.

Most watershed groups feel they have the capacity to serve as subrecipients for federal or state funding programs. This suggests that, despite challenges related to staffing or financial

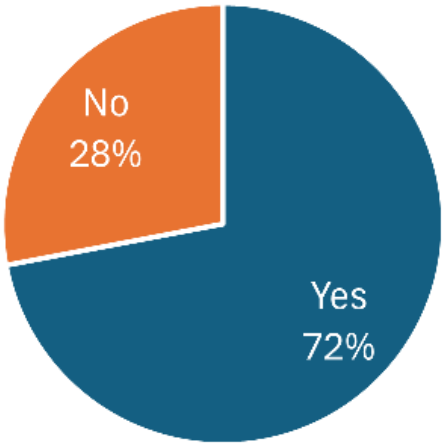



*Figure 69: IQ8. Do you believe your organization has the capacity to become a subrecipient (grantee) for PA DEP's new AML/AMD subrecipient award program?*

resources, these groups are confident in their organizational structure and ability to manage projects. However, 28% do not feel they have the capacity, likely due to limited resources or experience. Support in building administrative and technical capacity could help these organizations participate more fully in funding opportunities.

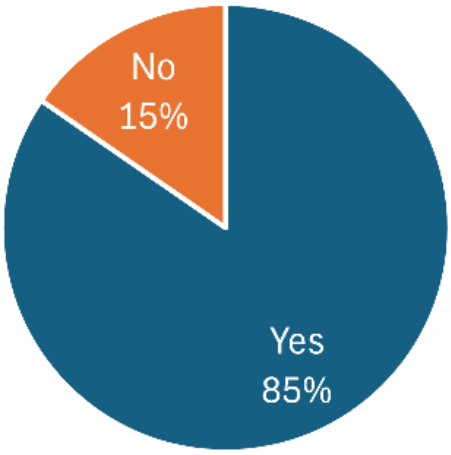



*Figure 70: IQ10(WO). Does your organization want to participate in AML/AMD subrecipient program?*

Question I10 asks "Does your organization want to participate in AML/AMD subrecipient program?" Responses are summarized in a pie chart (Figure 70).

In comparison to all responses (Figure 51), watershed groups responses remain similar with slightly less wanting to participate in the AML subrecipient program.

An overwhelming majority (85%) of watershed groups express a desire to participate in PA DEP's new subrecipient award program. This enthusiasm reflects a commitment to addressing abandoned mine land and acid mine drainage issues, and a willingness to engage in new funding opportunities. The few organizations that do not wish to participate may face barriers related to administrative capacity or regulatory compliance, underscoring the need for targeted outreach and support to ensure that all interested groups can participate. An overwhelming majority (85%) of watershed groups express a desire to participate in PA DEP's new subrecipient award program. This enthusiasm reflects a commitment to addressing abandoned mine land and acid mine drainage issues, and a willingness to engage in new funding opportunities. The few organizations that do not wish to participate may face barriers related to administrative capacity or regulatory compliance, underscoring the need for targeted outreach and support to ensure that all interested groups can participate.

This supplementary analysis in Section 2 reveals that watershed groups are deeply engaged in environmental conservation, particularly around abandoned mine reclamation (AMR) projects. However, they face significant financial and capacity challenges that could limit their ability to scale up their operations or participate fully in new grant programs.

Key areas for improvement include:

Financial Capacity - The lack of paid staff and credit access among watershed groups suggests that these organizations could benefit from targeted financial support, such as operational grants or low-interest credit facilities.

Procurement and Financial Governance - Many watershed groups lack formal procurement policies, indicating a need for capacity-building in financial governance. Training on procurement best practices and accountability measures could help these groups better manage funds and ensure transparency.

Compliance and Administrative Support - Given the uncertainty around compliance with federal regulations, offering training and administrative support focused on navigating complex grant

requirements (such as 2 CFR 200) will be crucial for empowering watershed groups to take on more significant funding opportunities.

Capacity Building for Subrecipient Roles - While many watershed groups feel capable of serving as subrecipients, there is still room to strengthen their administrative and technical capacities, particularly for those organizations without paid staff or formalized structures.

Despite these challenges, the overwhelming interest in participating in new funding programs, such as PA DEP's subrecipient award program, shows that watershed groups are eager to expand their impact. Providing them with the necessary resources, training, and financial support will enable them to continue their critical work in environmental restoration and conservation across Pennsylvania.

The "AMD Team" would like to thank the following organizations for participating in the survey!

- Mill creek coalition of clarion and Jefferson counties
- Trout Unlimited, Chestnut Ridge Chapter
- Blackleggs Creek Watershed Association and Cooperative Trout Nursery
- Slippery Rock Watershed Coalition
- Moshannon Creek Watershed Association
- Blacklick Creek Watershed Association, Inc.
- Wells Creek Watershed Association
- Clearfield Creek Watershed Association
- Trout Run Watershed Association
- Swatara Watershed Association
- Independence Conservancy, Inc.
- Friends of the Nescopeck
- Schuylkill Headwaters Association
- Catawissa Creek Restoration Association
- Evergreen Conservancy
- Paint Creek Regional Watershed Association
- Western Pennsylvania Coalition for Abandoned Mine Reclamation
- Stream Restoration Incorporated
- Turtle Creek Watershed Association
- Conemaugh Valley Conservancy
- Shamokin Creek Restoration Alliance
- Shade Creek Watershed Association
- Chalfant Run-Thompson Run Watershed Association
- Roaring Run Watershed Association
- Centre County PA Senior Environmental Corps
- Shade Creek Watershed Association
- Roaring Run Watershed Association / Kiskiminetas Watershed Association
- Pennsylvania Senior Corp
- Clearfield County Conservation District
- Lackawanna River Conservation Association
- Broad Top Township
- Mountain Watershed Association, Inc

- Centre County Conservation District
- Broad Top Township
- Westmoreland Conservation District
- Somerset Conservation District
- Lackawanna County Conservation District
- Wilkes University
- Lutherlyn
- Dallas Township Board of Supervisors
- Fayette County Conservation District
- Jacobs Creek Watershed Association
- Loyalhanna Watershed Association, Inc.
- Mountain Watershed Association
- Pennsylvania Anthracite Council
- Foundation for Pa Watersheds
- Pennsylvania Association of Conservation Districts
- Cameron County Conservation District
- Sullivan County Conservation District
- Allegheny Land Trust
- Delaware Riverkeeper Network
- Jefferson County Conservation District
- Indiana County Conservation District
- UpstreamPgh
- Clarion Conservation District
- Greene County Conservation District
- Elk County Conservation District
- Clarion Conservation District
- Venango Conservation District
- Oil Region Alliance of Business, Industry & Tourism
- Stream Restoration, Inc.
- Cowanshannock Creek Watershed Association

## Interviews

The POWR Interview series provides an in-depth look into the formation and experiences of each group interviewed, their reasons for successful projects, and the challenges they face going forward. These interviews offer a rich tapestry of stories that highlight the dedication and resilience of those working tirelessly to protect and restore their local environments. This comprehensive narrative aims to weave together the insights from these interviews, presenting a cohesive and expansive story of the watershed conservation community's efforts.

Notable interviewee quotes can be divided into the major topics listed below in no particular order and illustrated in Appendix A: Interview Themes Whiteboard.

1. Coalition Building, Partnerships, & Stakeholder Community Involvement
2. Long-term O& M and Trust Fund Establishment for AMD Treatment
3. Grant Management
4. Understanding Federal Policies and Acts
5. Indirect Cost Rate Development
6. Liability & Legal Concerns
7. Qualified Hydrologic Unit Plan (QHUP) Development & Watershed Assessment, Monitoring, Permitting, Restoration Planning
8. CWO Capacity Building and Organizational Development
9. Workforce Development & Professional Development Training on Grants and AMD Treatment

Many of the CWOs featured in the interviews were founded in response to specific environmental threats or community needs. Conservation Districts were created in the 1930s in response to the devastating effects of the Dust Bowl, which gave way to best management practices in farming and in many states, like Pennsylvania evolved into all types of local conservation efforts including water quality. The Babb Creek Watershed Association (BCWA) was established in 1988 following a pivotal lawsuit against the Antrim Mining Company, which led to the creation of the Antrim Treatment Trust. Similarly, the Shade Creek Watershed Association was formed in 1999 by a group of concerned volunteers in Brownfield who sought to address issues of mine drainage and stream health.

The formation of these organizations often involved passionate individuals coming together to tackle pressing environmental issues. Over time, these groups evolved, expanding their focus and developing more sophisticated approaches to conservation. For instance, the Tioga County Concerned Citizens Committee initially formed to combat a landfill in the 1980s but later shifted its focus to mine drainage and water quality monitoring.

Throughout the interviews, several key projects emerged as significant milestones in the organizations' histories. The Babb Creek Watershed Association, for example, has managed several passive treatment plants and the Active Antrim Treatment Plant, significantly improving water quality in the Babb Creek watershed. Their efforts have been bolstered by strategic partnerships and the receipt of over two dozen grants from various sources, including PA Growing Greener and the US Environmental Protection Agency (EPA).

The Loyalhanna Watershed Association has also achieved notable success with projects like the Monastery Run treatment system and the Upper Latrobe Trail treatment system. These projects, developed in collaboration with St. Vincent College and other partners, have played a crucial role in addressing abandoned mine drainage (AMD) and improving stream health.

Similarly, the Shade Creek Watershed Association has focused on passive systems and limestone dosing to treat streams impacted by mine drainage. Their efforts have been supported by grants and partnerships, but they continue to face challenges related to volunteer engagement and administrative capacity.

Strategic partnerships are crucial for the success of watershed organizations, as emphasized throughout the interviews. Many groups collaborate with local, state, and federal agencies, as well as other nonprofits and educational institutions. These partnerships provide essential technical and administrative support, helping organizations to overcome capacity limitations and achieve their conservation goals. The Shamokin Creek Restoration Alliance (SCRA), for example, has built strong partnerships with Bucknell University and the EPA, allowing them to expand their focus beyond water issues to broader community development. These collaborations have been instrumental in securing diverse funding sources and undertaking larger projects.

Engaging the community and maintaining involvement is essential for the long-term success of watershed projects. Many organizations emphasize the importance of public outreach and education to foster a sense of ownership and support for their efforts. For instance, the Loyalhanna Watershed Association has focused on improving public access to streams and involving local schools and community members in environmental education and restoration activities.

Despite their successes, watershed organizations face numerous challenges, many of which are highlighted in the interviews.

Volunteer engagement is a significant challenge. Many organizations rely heavily on volunteers, who are aging and face burnout. Recruiting new volunteers and maintaining active membership is difficult, and the substantial administrative workload exacerbates these issues. For example, the Shade Creek Watershed Association expressed concerns about their capacity to manage large-scale projects and comply with federal grant requirements with no paid staff and volunteers who are well into retirement age.

Funding is also a persistent issue, with many groups struggling to secure consistent and sustainable financial support, especially for the operations and maintenance of existing AMD passive treatment systems. The reimbursement nature and lack of a working capital provision for state and federal grants often strains cash flow.

Effective administrative and financial management are critical for the sustainability of watershed organizations and is a key concern for the interviewees going into this new era of funding. The interviews highlight various strategies employed by these groups to manage their finances and ensure compliance with regulatory requirements set forth in 2 CFR 200. For example, the Indiana County Conservation District discussed the use of bridge loans to cover working capital for large projects, which is not provided in the new PA DEP BIL/IIJA AMD/AML subrecipient grant program. Having the capacity to obtain loans or a line of credit may be the answer to alleviate cash flow issues associated with the reimbursement nature of federal grants.

However, the administrative burden remains substantial. Many organizations lack the capacity to manage the extensive reporting and compliance requirements of federal grants. Adherence to 2 CFR 200 regulations is a major hurdle. Organizations must navigate complex and sometimes inconsistent federal and state regulatory requirements. Issues with procurement policies and indirect cost acknowledgment are common. The Cambria County Conservation District, for instance, highlighted the

need for clear, specific procurement guidelines from the state to ensure compliance and avoid the risk of unreimbursed expenses.

The interviews gave organizations an opportunity to share concerns they have with current policy and programs around AMR and present ideas they have for increasing their participation in the new PA DEP BIL/IIJA AMD/AML subrecipient Grant program. Many of these ideas are reflected in this report's recommendations section. However, it is important to note that many groups are decidedly operating and participating at their current comfort level and many don't have a desire to increase capacity. They are content with aiding other partners in projects, using pass-through agents for funding, and leaving grant administration headaches to organizations, like county Conservation Districts, who have paid staff.

The POWR Interview series provides a comprehensive and detailed view of the current state of watershed organizations in Pennsylvania. The insights gained from these interviews highlight the strengths, challenges, and opportunities within the sector. By addressing identified barriers and leveraging existing strengths, these organizations can continue to make significant strides in conservation and environmental restoration efforts.

The story of the POWR Interview series is one of resilience, collaboration, and a shared commitment to preserving Pennsylvania's water resources. It underscores the importance of continued support, capacity building, and strategic partnerships to enhance the effectiveness and sustainability of watershed conservation efforts. Through these collective efforts, Pennsylvania's watershed organizations can achieve lasting environmental impact and contribute to the health and vitality of the state's natural resources.

## Barriers and Issues

CWO's across the Commonwealth of Pennsylvania face several challenges, complications, and barriers that can reduce and sometimes even completely inhibit participation in grant programs that fund AMD/AML planning, assessment, design, construction, operation, and maintenance projects. These issues can even inhibit them from participating in the projects entirely and the barriers may cause them to feel excluded or disenfranchised from the entire process. Based upon data collected from the surveys, interviews, and personal discussions held with members of these groups who represent various levels of participation and community involvement as well as expertise and strengths, the following provides a discussion of select barriers, concerns and impediments. It is not meant to be a completely exhaustive list. An attempt has been made to organize these issues into relevant topics; However, because of the nature of the issues themselves, many of them can easily fit within multiple categories. The barriers presented in this section are then addressed within the Recommendations Table section.

### Grant Administration & Management

*Grant Administration Capability and Desire* – Many of your traditional grassroots, community-based watershed groups are small, volunteer groups of citizens who want to address environmental issues within their community, but they either do not want to administer grants and/or do not have the knowledge, staffing, software, computers, capability, or other organizational capacity to administer grants. Even CWOs who do have desire and some level of capability, are often limited to what they can achieve by the same sorts of administrative capacity issues. In addition, some CWOs cannot administer or manage grants themselves because they are not an eligible organization recognized by the Commonwealth of Pennsylvania and other federal or foundation organizations. Often this is because the CWO has not obtained a 501(c)(3) designation by the Internal Revenue Service through a Letter of Determination.

*Working Capital* – A major concern related to the implementation and fiscal management of the BIL funded AML/AMD program is the lack of working capital, especially related to construction projects. Many other grant programs provide all or a portion of upfront working capital that CWOs can use to pay bills and then submit reimbursement requests. In the new AML/AMD program, working capital is not provided and the approved projects are reimbursable only. It is the responsibility of the grantee to incur the cost and then submit a reimbursement request. CWO's typically do not have bank accounts with sufficient funds to finance the projects which means they will either not be able to pay bills until they get reimbursed or will have to seek out lines of credit or loans. CWOs do not know how to navigate seeking lines of credit from banks and may not have enough equity to qualify for a line of credit. During major construction periods, these AMD/AML projects can easily have expenditures of $100,000 or more per month from subcontractors, designers, and engineering and consultant firms.

*Reimbursement Request Process* - Further complicating the lack of working capital is that the current reimbursement request process can easily take 60 days or longer to receive the reimbursement payment. Prior to receiving payment, CWOs need to be set up to do business with the government including obtaining a federal Unique Entity ID as well as obtaining and maintaining registration through

www.SAM.gov, and obtain a, acquire a Vendor ID number through the Commonwealth of PA's Office of Budget Vendor registration process, and the IPP Vendor web-based system that provides one integrated, secure system to simplify the management of vendor invoices if they want to receive the funds through ACH. In addition, typically the PA DEP has a holdback amount of 15% which is not paid to the grantee until the project, final report, and final reimbursement is submitted. It could be many months once major construction is completed before that documentation can be submitted, leaving both the grantee and the contractor in a difficult position.

*Indirect costs (aka admin)* – Indirect, also often referred to as "admin" by other grant programs is a critical funding component of a grant for a nonprofit organization as it provides a source of funding to pay for expenses that are not specific direct costs to the project, but critical to the organization such as rent, utilities, software, accounting, and general organizational management. There appears to be confusion, misunderstanding, and/or general disagreement related to how indirect costs are calculated and applied within the new AML/AMD grant program. The grant application instructions are not clear and seem to conflict with both grantees' and other governmental agencies' interpretation of 2 CFR 200 in terms of which grant expenses can be used to calculate the indirect amount. In addition, some organizations have reported that even though they have an approved individual federal indirect rate that exceeds the 10% de minimis they have received pushback on applying this rate, although we do not have any documentation to validate this claim. This confusion has led to organizations receiving much less "admin" funds than what they would typically receive from Growing Greener even though Growing Greener places a maximum 5% admin percentage.

*Audits* – CWOs who spend more than $750,000 of federal funds within a year will be subjected to Single Federal Audit. This is an expensive, daunting and scary task, especially for smaller CWOs who do not have previous experience. This process is intimidating to the point that it is a major deterrent for participating in and completing large federally funded projects. Obtaining an accurate quote prior to grant submission(s) may be difficult to get when a Certified Public Accountant might reserve a quote until after they know how many grants they are going to have to audit and the total amount of funds are received and expensed through a given fiscal year. A further complication is that many accounting firms do not even offer this service due to the expense and intensive nature of the audits.

**Grant Process Efficiency**

This section is primarily related to issues that those involved with the new AML/AMD program have experienced. These may be individual issues and not necessarily program-wide and potentially are related to the new program being developed. It is also quite possible that these issues have since been addressed.

- There appears to be concerns and confusion among CWOs associated with various aspects of the new AML/AMD grant program regarding the application process, questions within the application, rules of the grant program, etc.

- People have indicated that they are concerned about the increased demands of grant administration that BIL-funded projects and CFR requirements. They are especially concerned about procurement processes.
- Numerous people have indicated issues with various DEP grant programs including Growing Greener related to knowing the status of various administrative processes such as grant contracting and reimbursement requests. Grantees "feel bad" about repeatedly bothering DEP staff, but a delay in processing can delay project start dates, construction seasons, and payments.

**Technical Deficiencies**

CWOs are often volunteer-based organizations made of up individuals who care about their local watersheds, but often lack the technical knowledge, manpower, funding, or other resources needed to implement restoration projects. Each organization is unique and therefore their needs are unique. Common problems are:

- Lack of knowledge, ability and/or funding related to water monitoring and macroinvertebrate sampling
- Lack of knowledge and ability for data management and data analysis
- Lack of scientific knowledge for the interpretation of data and decision-making
- Lack of knowledge and ability to inspect and monitor AMD treatment systems and the interpretation to determine if functioning, when maintenance is needed, and what types of maintenance.
- Lack of capacity, knowledge and ability to perform AMD treatment maintenance, especially for more complicated issues. This also includes a lack of equipment and funding and further explored in OM&R section.
- Lack of training opportunities for the volunteers to become knowledgeable in water quality monitoring, macroinvertebrate identification, water quantity flow measurement techniques, wetland plant identification, culvert assessments, fish identification, and tree identification.

**Liability & Legal Concerns**

*Legal* – There are a number of legal and liability issues that CWOs must deal with during the implementation of grant-funded AML projects. These issues will vary depending on both the nature of the project as well as the type, size and structure of the CWO. Items such as bylaws, landowner access agreements, grant contracts, liability insurance and coverage maximums, directors and officers insurance, subcontractor contracts, regulations related to employees, the day-to-day operation of the CWO, and environmental permitting are just a few. It is nearly impossible to be well versed in all of the legal issues that a CWO may face. Small CWOs typically do not have the funding or access to free or affordable legal advice. This means these groups tend to forgo seeking legal advice and instead rely on their own knowledge (or lack thereof) and research or ignore the issue altogether. Further complicated by a lack of legal professionals, is a lack of paid employees, and /or lack of volunteers willing to take on these issues, which leaves the CWOs in a potentially difficult position.

*Policy Development* – Similarly, CWOs are expected to have a wide range of policies in place including Conflict of Interest, Procurement, Nondiscrimination, Employee, etc. These policies cover a variety of topics and often require specialized knowledge and the ability to read and process federal and state laws that are often vague, confusing and sometimes conflicting. Many CWOs, especially watershed groups and smaller nonprofit organizations do not have all of the policies needed or do have sufficient policies. As the laws are complicated, developing these policies are complicated and time consuming at best. CWOs are in need of free support services to help develop these policies and/or free templates that could be utilized.

*Human Resources* – Related to the above, hiring employees and implementing employee policies and procedures and benefits programs can be very complicated involving numerous laws and regulations. It is nearly impossible to expect small CWOs to understand, navigate, and implement. CWOs are in need of free or discounted support services to help develop and implement these programs and services.

**Policy Issues**

*Pennsylvania Environmental Good Samaritan Act (PAEGSA)* – While the PAEGSA has wonderful intentions of protecting landowners and CWOs who complete watershed restoration projects, it is a very complicated and time-consuming process that many CWOs are discouraged from completing the application.

*Permitting* – One of the issues that faces CWOs involved in watershed restoration regardless of the funding source is permitting. Sometimes the permitting process can be quite lengthy and difficult and on a number of occasions has resulted in either preventing the project from being completed at all or reducing the available area for construction of AMD treatment systems. In cases where the size of the treatment system has been limited, the treatment effectiveness and capacity can and has been reduced. The most common permitting issues that cause the most problems are associated with wetland and stream impacts and often involve the US Army Corps of Engineers or the general PA DEP Regional Offices. Other potential issues of concern revolve around the presence of endangered plant or animal species or historically and culturally important archaeological sites. While many of the permitting issues are just “part of the process” that must be completed, there is a need to perhaps educate regulators as well as provide special waivers or “restoration permits” that may help to speed up the process and not hold these projects to the same scrutiny as other types of projects due to their positive environmental impact. While the US Army Corps of Engineers does offer a “Restoration Waiver” process, approval can be costly, take a long time and is certainly not guaranteed.

*Circulating Fluidized Bed (CFB) Power Plants* – CFB plants are a specialized type of electric generating power plant that have the capability of burning coal refuse and are an invaluable partner in reclaiming abandoned mine lands where coal refuse piles exist. Coal refuse which are also known locally as gob and culm is the reject material produced by coal mining that was considered unusable. This material was often dumped in large quantities forming “mountains” of coal waste. The coal refuse was often rejected due to the high quantity of sulfur and/or low BTU quality. Unfortunately, this material often has very high iron sulfide mineral content and when left exposed to the air and precipitation results in

the creation of some of the worst AMD discharges in Pennsylvania. This coal refuse material, however, can be "remined" and taken to the CFB power plants where it is mixed with limestone dust prior to combustion resulting in an alkaline ash that can then be brought back to the site to help with reclamation of the site. This type of project is a true win-win-win in which electricity gets created from a waste material, jobs are provided, and environmental restoration is completed. Unfortunately, due to a combination of economic market conditions, environmental regulations and permitting challenges, and even sometimes public perceptions these CFB plants have struggled to remain economically viable. Several have closed and/or reduced capacity.

There is a real risk of the remaining plants to permanently close which would effectively end the true reclamation of these piles. These plants need to be seen as part of the reclamation solution and efforts need to be made to subsidize their operations, waive overly stringent regulations and other reasonable measures to ensure their continued operation, expand their capacity, and perhaps potentially build new or reopen a few additional plants to expedite the reclamation of these eye sores and sources of pollution. The ARIPPA trade association should continue to be a part of the ongoing communications with CWOs and the state and federal agencies in PA since they have been a major contributor to the reclamation of abandoned mine lands in the Commonwealth and have supported CWOs, Conservation Districts, and regional non-profit organizations working on abandoned mines for decades.

**Capacity**

If you discuss the BIL funding and the new AML/AMD program with any of the numerous types of organizations and individuals involved in the abandoned mine reclamation field, one of the most common themes discussed is concerns related to the capacity of all organizations involved at all levels of project implementation. This includes:

- Lack of enough CWO administrative and grant management staff and the funding to pay them.
- Lack of funding to maintain a central office setting
- Lack of funding for field equipment to gather field water quality data including pressure transducers, proper bottles, titration solutions and tablets, stilling wells, multi-parameter probes, field testing kits for water quality, flow meters, weirs, Mayfly DIY units, and spectrophotometers
- Lack of CWO technical staff (and funding) for water monitoring and maintenance.
- Lack of funding to support the development of projects and write grants.
- Lack of qualified engineers with the knowledge and experience to design effective and long-lasting AMD treatment systems with minimal maintenance issues.
- Lack of qualified construction contractors with knowledge and experience to correctly build AMD treatment systems that will last.
- Lack of DEP grant administrative staff to manage grants and complete reimbursement requests and the use of DEP technical staff for this purpose who are then in turn not completing needed technical work.

**Operation, Monitoring, Maintenance and Rehabilitation (OM&R)**

Once an AMD treatment system is constructed there is a need to conduct regular site inspections and water monitoring to document and determine if the system is functioning properly and identify maintenance issues. When performance declines or a maintenance issue is discovered, it is imperative to conduct the necessary actions as soon as possible to ensure continued treatment. One of the most important issues is the lack of funding for OM&R, but this issue can be further broken down. First and foremost, is a general lack of dedicated funding for OM&R. While there is plenty of funding available for building treatment systems, obtaining funding for everyday and long-term operation, monitoring, and maintenance is often not easily accessible. Many of the typical funding sources do not provide funding for O&M or are not willing to pay for all of the needs. In addition, obtaining funding is difficult and requires frequent grant applications. Further complications include a lack of personnel, volunteers/staffing, knowledge/training, and equipment. Due to grant funding rules and a lack of funding, "trust funds" are typically not established for long-term operation and maintenance.

*Water Monitoring Program* – There is need for funding specific to inspection and water monitoring of the AMD treatment systems. For many groups, Stream Restoration Incorporated's Passive Treatment Snapshot events (currently only once every couple of years) are the only opportunity for them to collect water samples for laboratory analysis of their passive systems. Funding is needed that allows for regular inspection and water monitoring. This includes the cost of equipment for test kits and meters for field water monitoring testing as well as for laboratory analysis of water samples and shipping costs, etc. It would be helpful to also have costs to cover the expense of mileage and possibly even per diems for overnight accommodations if needed. Financial support is also needed for employees of non-profits, when volunteers are not available as well funding for those involved in the management of volunteers and data entry, management, and analysis. If a Quality Assurance Project Plan (QAPP) needs to be approved prior to monitoring, additional funding would be needed as their development and renewal take an inordinate amount of time to create and develop that would typically exceed the limited resources and abilities of the CWOs.

*Maintenance* - There is a need for CWOs to either have their own individual funds for maintenance and/or more fundings sources, technical assistance, equipment and maintenance providers. While Stream Restoration Incorporated's O&M TAG program has been quite successful in helping CWOs with their maintenance needs it does not currently have sufficient funding, internal capacity (funding-related), and enough external contractors to support the needs of all CWOs across the Commonwealth at this time. In addition, some organizations may prefer to handle their own maintenance to some extent or to perhaps work with other organizations rather than SRI. Similarly, WCPAMR's Quick Response program has been able to provide funding to groups for O&M and emergency issues but does not provide the technical assistance or equipment that may be needed. Even when combined together, the two programs do not currently have the funding and capacity to meet the need. In addition, while EPCAMR also often has entered into monitoring agreements with number of groups to perform the water quality and flow monitoring necessary for the CWOs to make informed decisions based on yearly

data collection that is often needed as a stipulation of the grant agreements, there is not a specific O&M program for groups to easily access in the Anthracite region therefore requiring them to rely on.

## Misconceptions

Throughout the study, input was sought from CWOs who shared their concerns and experiences as well as their thoughts and ideas to solve problems. We greatly appreciated all of the input. Everything shared was at least worth consideration and further exploration; however, some of the concerns were found to be rumors, misunderstandings and misconceptions and some of the thoughts and ideas generated were found to not be realistic viable solutions for various reasons. As we know that these concerns and ideas are important to the AMR community, we have tried to address at least some of these within this section of the report. The concern, thought, etc., is provided in bold italics with a response immediately following in regular type. To the best of our ability, we have tried to generalize the statements to protect identities.

1. ***The AMLER and BIL funded AML/AMD program grant contracts cannot be amended:*** This is not true. While the DEP certainly wants to avoid amendments, they do recognize that they are sometimes necessary. The DEP has already amended grant contracts under these programs related to funding and time, but there does need to be sufficient justification to do so.
2. ***Allow CWO's to use the "BAMR waiver" for AMD treatment system construction:*** PA DEP's Bureau of Abandoned Mine Reclamation (BAMR) does not have a special waiver for AMD treatment systems. BAMR must comply with the same laws and regulations. BAMR does have the authorization to be self-permitting on their own in-house designed and bid projects; however, they are not allowed to extend this to sub-recipients. It is our understanding that this is at least in part due to the fact that BAMR does not have the authority to take compliance actions and enforce permits, therefore they do not have the authority to issue permits. In addition, t is more likely advantageous to the Pennsylvania AMR community to have a partner like BAMR who is focused on completing the work and not focused on regulatory compliance.
3. ***Could CWOs use BAMR's list of DES-22 qualified engineers to choose consultants instead of developing and going through their own RFQ/RFP process? If so, does BAMR publish that list anywhere that they could access?*** The method of procurement is up to the Subrecipient, but the process needs to comply with 2 CFR 200. It is important that the process and decision in selecting contractors is documented. DEP could provide that list to anyone as its public information, but it must be understood that the list of "qualified engineers" is not in any way an endorsement or automatic qualification for these engineering firms, especially since some have been selected due to their specialized experience in specific areas. Therefore, even if a CWO were to obtain that list, it would likely not be appropriate to just choose someone from the list without further considerations. There should be some sort of proposal process or possibly a rationalization based upon the CWO's procurement policy that comply with 2 CFR 200. It is the AMD Teams understanding that the way DEP handles this is that they have the initial RFQ process to develop an initial list of "qualified engineers". They send firms on that list a scope of

work and then contractors submit a Task Implementation Plan (TIP) and cost estimate which the DEP then uses to select the firm.

**Summary of Recommendations (edits to original report have been made by POWR for this published version)**

At the core of almost all of the recommendations is addressing the challenge of inadequate "organizational capacity" to develop, implement, and maintain projects and manage the significant financial resources necessary to do so in perpetuity. Under this large 'umbrella' are more specific recommendations related to:

- Training volunteers, staff, and other leaders in skills necessary for funding acquisition and management,
- Easing the burdens for watershed organizations associated with securing and managing grant funds,
- Instituting greater efficiencies and transparency within state and federal agencies and reducing, to the extent practical, bureaucratic "barriers to entry" for entities to serve in the role as sub-recipients of AML/AMD funding,
- Increasing pathways of communication among all the key partners involved in AML/AMD projects,
- Ensuring that legal and liability assistance efforts are available to entitles taking on the complex work of AML/AMD project coordination, implementation, and monitoring,
- Supporting efforts to increase staff at all levels and within all agencies, organizations, and companies doing AML/AMD related work,
- Advocating for smart state and federal policies that serve to support and not hinder these critical efforts, and finally,
- Continued and expanded funding for critical training, operation and maintenance, staff positions and operational costs within sub-recipient entities, tracking and monitoring databases, maps and other tools, and more.

**POWR's Commitments to Advancing Recommended Actions**

In consultation with various parties including the consultant team, PADEP, Foundation for Pennsylvania Watersheds, and others, POWR has carefully considered and selected the recommendations that we are committed to advancing, promoting, and implementing assuming that funding and other resources are successfully secured to do so. These recommendations and activities were selected as they are most closely aligned with POWR's mission and reflect the type of work in which POWR engages to support and enhance the capacity of CWOs to further their local and regional waterway and watershed conservation, restoration, remediation efforts. The majority of the recommendations selected address issues, needs, and challenges related to federal grant application process, administration, and management, though they also cross over into technical and legal limitations identified in the report.

Therefore, POWR will:

1. Facilitate, develop, and provide training and support services with the goal of increasing knowledge and skills necessary for CWOs to be active, informed, and engaged partners and local leaders of remediation project planning, development, and implementation. Such training could include topics such as reimbursement requests, indirect costs, procurement, accounting principles, preparing and

completing audits, budgeting, 2 CFR 200 compliance, etc. With the support of key partners, and depending on their capacity, POWR will also strive to facilitate the provision of training related to science of AMD and treatment, water/system monitoring, macroinvertebrates, data management, data analysis and interpretation, inspection and maintenance of treatment systems.

2. Develop and begin to implement a targeted low or no cost technical, fiscal, and legal assistance framework for organizations who wish to access funding, especially federal dollars designated through the PADEP, for these efforts. Work could include creating and making available template policies necessary to be in compliance with federal funding/procurement regulations.

3. Develop a publicly available, well-researched, annotated report or online tool that serves as a clearinghouse of existing low and no-cost technical, fiscal, legal, and organizational and management support programs and federal grant assistance programs

4. With the support of a consultant, evaluate the viability and implementation approach to expanded fiscal agency/ sponsorship (sometimes knows as management commons) in order to address federal grant administration and fiscal management challenges and barriers facing CWOs working to advance AMD remediation projects

5. Help inform and support AMD related advocacy regarding policy, funding, and program regulations facilitated by PEC leadership and policy staff in order to ensure that our agency partners are in the best possible position to secure the necessary resources to lead and coordinate statewide AMD remediation project implementation.

Although not specifically a part of the report of its recommendations, POWR also intends to work with other PEC staff to plan for and carry out an initiative to explore opportunities for planning for recreational access to newly restored waterways. Such an effort will require utilizing a wide range of data, mapping and other information sources to prioritize areas, landscapes, and recreation types as well as the building of a coalition to advocate for and advance recommendations.

POWR

Pennsylvania Organization for Watersheds & Rivers

# Appendix A: Interview Themes Whiteboard