

**AMD Remediation
Focus Group Meeting
January 31, 2008**

Introduced those present as follows:

David Strong, CAC/MRAB/EQB
Duane Feagley, PAC
Michael Hewitt, EPCAMR
Margaret Dunn, Stream Restoration, Inc.
Tim Danehy, Stream Restoration, Inc.
Bruce Golden, WPCAMR
Dave Steele, USDA NRCS, Southern Alleghenies
Sue Germanio, PA Coal Association
Bob Hedin, Hedin Environmental
Mike Korb, DEP, BAMR, Wilkes-Barre
Dan Koury, DEP, DMO, Pottsville
Steve Kepler, PFBC
Amy Wolfe, Trout Unlimited
Tom Clark, SRBC
Nick Pinizzotto, WPC
Mark Killar, WPC
Todd Wood, DEP, BAMR, Wilkes-Barre
Clayton Bubeck, Rettew
Rick Tote, The EADS Group
Jon Dietz, Iron Oxide Tech.
Brent Means, OSM
Mike Ferko, DEP, BAMR, Special Assignment
Bernie Walko, DEP, BAMR, Wilkes-Barre
Dan Helfrich, DEP, BAMR, Central Office
Rod Fletcher, DEP, BAMR, Central Office
Pam Milavec, DEP, BAMR, Cambria
Phyllis Cocco, DEP, BAMR, Cambria

Review and Discussion of Background Information

- Pam Milavec: This focus group is a result of the Roundtable meetings held for public input during the spring/summer of 2007.
- Pam Milavec gave a background on the reauthorization.

Tech Issues - Active Versus Passive Treatment, Technological Improvements to Future Passive Treatment Projects, In-Situ Treatment, Emerging Technologies and Project Selection

- Pam Milavec: Requested comments on the topic and comments received in public meetings – passive does not work and active too expensive. Need to pick

tool from toolbox that best fits – need to consider if there are entities that will cover operation and maintenance (O&M). Bureau has evolved from doing primarily passive systems to doing very large, active treatment systems. Pam opened meeting up for comments.

- Bob Hedin: BAMR has \$30 million in AMD Treatment projects on the shelf. Chemical treatment already planned. Cost have increased since then and would like to know the status – how is cost being maintained?
- Rod Fletcher: Due to pressure of the agenda – this will be discussed later in program. Need to focus on technical issues.
- Bob Hedin: I can wait until later.
- Jon Dietz: Historically AMD treatment was active then pushed toward passive with low cost or no cost O&M - based on these technologies, it was learned this was not the case. Active reuse of water, site conditions and cost need considered. DEP needs to work with OSM in identifying projects with low cost options. Need to look at all tools available, what technology is best applied in discharge and watershed. Examine costs and resource recovery. Need good solid design criteria, whether active or passive. Look to past results, how good is engineering and design information behind it. DEP and OSM have taken good steps. Some will work and some won't. Look at research and development into both active and passive.
- Pam Milavec: DEP has funded and has ongoing innovative technology grants.
- Pam Milavec: Winner Energy at St. Michael, DEP will be looking at how does the cost compare. Would like to look at recovering materials rather than having sludge, etc. but need to look at cost effectiveness.
- Dave Strong: Need to have best data available to get best system. Asked how DEP evaluates.
- Pam Milavec: There is an internal work group, DEP staff involved and Brent Means. November was their first meeting. They are looking at project selection and it is tough.
- Rod Fletcher: This issue was under consideration as a focus group topic. It is a very difficult issue and DEP needs some internal discussion first. It is a big challenge with a lot of issues. Any ideas would be appreciated.
- Bernie Walko: What system is best could be anything. Need to look at geometry. Anything can make you change. No way to set up a set process. It is by trial and error. The design of a treatment system is very important.
- Pam Milavec: Introduced Bernie Walko and Mike Korb.
- Dan Helfrich: Need to go back and define goals of project and what is the probable success then how you want to go about meeting them. Passive systems are inherently unreliable.
- Jon Dietz: One of the first things that should be looked at is the project goal and whether this is a cold water or warm water fishery. What are the watershed's goals? This should be first in process. He agreed that the watershed goals should be the first step in the project.
- Pam Milavec: Existing criteria for project selection is handled by BAMR. The Comprehensive Plan for Abandoned Mine Reclamation is going to be revised. Open for input or comments now or by email.

- Dave Strong: Pollution prevention should be an aspect – reduce AMD generation. If you revegetate the ground, the water quality improves dramatically. Stop the pollution up front. May be cheaper than treatment. Need to do what is best economically. How does BMAR prioritize sites? BAMR should look at reforestation.
- Pam Milavec: BF projects with surface mines will breach low walls to get the water out faster and reduce AMD generation.
- Dave Strong: How do we get this in the mix? How do we tie it in with other monies available?
- Mike Korb: Agrees with investing 30% for the future. Look at bigger projects that get more synergy do more things for public (recreation, development, etc.). Need to look at end uses of the water, the chemical system and what are we going to do - may need to combine passive and active. We need to look at big picture more.
- Dave Strong: How do you do this? Does DEP have the staff?
- Mike Korb: Need to involve other partners and watershed groups. Water projects are recognized more than backfilling projects.
- Dave Strong: The long-term water effects versus the bang for the buck in backfilling abandoned strip pits should be determined.
- Bob Hedin: Disagrees that passive is inherently unreliable and needs reconsidered. Is it poor engineering or good engineering? Don't confuse poor engineering with bad results. Many do treat water 24/7 with no problems and are not unreliable. Active is not always reliable. Brandy Camp had been down for two weeks for maintenance, should have backup system. Some passive systems are reliable. Need to look at types of active systems, not just lime dosing which doesn't get back cold water fisheries. If a passive treatment system is designed properly, it works.
- Mike Korb: This is part of the engineering also. He operated a treatment plant for 20 years with no violations. In-stream lime dosing may help the main stem but not the tributaries.
- Tom Clark: Sometimes you need to sacrifice a tributary for the sake of main stem restoration. Consequently, lime dosing silos should be considered more in these cases.
- Pam Milavec: Referred to Porcupine Run which will never be recovered. They are installing a lime doser and will be evaluating potential impacts to the next receiving stream, Dents Run.
- Margaret Dunn: Should not be active versus passive but what is right thing to do based on current technology. There are 258 passive systems statewide – how much money has been spent on these? Do we have this information in association with the O&M costs? They spent three thousand dollars on O&M for twelve AMD treatment systems that treat 750 million gallons per year in the Slippery Rock watershed. You need to have data so you can make good decisions.
- Mark Killar: What our goal is – is very important. Do not discount lime dosing – it depends on the watershed.
- Jon Dietz: It depends on discharge chemistry. Need selection criteria on site constraints and watershed goals. There are places in the Anthracite Region where

the discharge pH is 2.5 and the Fe, Al, and Mn are less than 10 mg/l. St. Michael discharge, for example, contains 105 to 200 mg/l of Fe. Environmental issues do not let you consistently use active systems. We need some kind of guidance. There is a need for a DEP technical manual that can be shared with the watershed groups.

- Dan Koury: Delivery of funding often times drives system we get. If done by BAMR, they would make the decision and have the money. For grants, have submission evaluated like Growing Greener submissions. In the past, the delivery system for the funds often drove the project selection process.
- Rod Fletcher: This is on the agenda under delivery systems. In the past, system may have been affected by delivery of funds.
- Tim Danehy: Everyone is saying same thing. We all want to do the best thing. Everyone involved should be putting the best information out there for use by everyone. Make sure working professionals continue to share ideas in progress and in development.
- Pam Milavec: Had someone ask for document on passive treatment BMP. There is nothing out there. This is a mature enough program for it to be available.
- Margaret Dunn: I agree, that is excellent. This should be on the internet.
- Bernie Walko: BMP is not always what it is meant to be – for example, a BMP for a rock apron may have put more sediment and pollution in stream. There is a need to use common sense also.
- Pam Milavec: May need focus group on this item.
- Jon Dietz: Does not recommend BMP for vertical flow wetlands. You need to be careful if you establish a standard and it fails or leads to 30-50% failures. We cannot become inflexible.
- Bob Hedin: Every project should run a spreadsheet on long term cost before bidding. Should be part of process.
- Dan Helfrich: One thing is missing. Need to take individual discharge and use bench test system, using cost, potential O&M, etc. Everything has its own place. There is a need to determine what system is most appropriate.
- Mike Korb: There is one step before that – modeling program. A lot of step modeling is presently being done by companies.
- Dan Helfrich: Need to look at different things. Look at what you are getting for what you are spending.
- Amy Wolfe: Need to approach with tools available but also need to look at O&M and who will be responsible. Amy gave an example - limestone drain in Rausch Creek. Trout Unlimited takes care of this and it is no problem at present. They have older, retired men hauling the stone. They came to Amy to see how else they can treat as they cannot continue this on a weekly basis. Kettle Creek volunteers cannot check their systems daily. Many sites are not accessible four months of the year so active systems may not be an option. She recommended that a BAMR inspector should check each constructed treatment system.
- Dave Steele: The USDA process uses a managed interdisciplinary planning approach. They send a team to the site to look at the issues then design to the least cost alternative. This does not mean that is all that will be built there. We

need to consider long term cost and local groups available to commit resources. They may not be able to sustain forever – do not have manpower or resources.

- Amy Wolfe: We only think about treatment. We have forgotten about what can we do to reduce the drainage. It may be reclamation, remining, etc. We need to look at all this and reclaim as much of the surface as possible before any type of actual treatment of the discharge is undertaken. Amy urges caution on instream lime dosing, especially for cold water fisheries, because little is known about the effects of precipitates on downstream biota. Careful evaluation for each site should be done prior to recommending instream dosing.
- Pam Milavec: We need to be cautious.
- Jon Dietz: Not all lime is equal. Maryland uses calcite not lime but it is categorized as lime. We need to look at difference. John commented about using coal when treating with lime – one-half ton of coal is required to produce one ton of lime. It can be very confusing when speaking about lime. Virginia has policy – don't create adverse affects. There are differences in limestone, agricultural lime, hydrated lime and slaked lime.
- Brent Means: We are focusing on cost. While costs are important, convenience can come into play. Some treatment systems may be costly up front but not in long term (example: peroxide – no moving parts). We need to look at this also.
- Pam Milavec: We have 55 passive treatment systems where Brent Means has been evaluating their effectiveness.
- Brent Means: Basically, vertical flow ponds (limestone ponds) – how do you determine if success without goal upfront. Example used was Oven Run: removed 50% of acidity. Brent asked BAMR is this a good job or bad, what was your goal. According to Rich Beam, the system has helped recovery in the receiving stream even though only partially treating. Difficult to evaluate without agreed upon standard of what you want. Need to consider what is successful, what is the maintenance cost; need cost analysis (is it cost effective) and compare to active system. Need to consider what cost would trigger a maintenance program. Brent tried to do this for BAMR but it is very difficult.
- Rod Fletcher: We need to talk about systems where it is apparent they are not working effectively. A decision needs to be made on what to do regarding these systems.
- Brent Means: Some are minimally successful and some are ripped up and replaced several times. Best alternative may be to abandon the site and possibly use new technology later. Not all passive is bad; wetlands are successful, ALDs – right type of water can be successful. Net acidic discharges with limestone based systems can be unpredictable. Need to know nature of vertical flow problem and when to do something on them and when to let go.
- Dan Koury: There is a lack of monitoring at the sites. There is a lot of data on the BAMR systems but not for those installed under a grant. The money is not available.
- Brent Means: BAMR has plenty of AMD data available.
- Todd Wood: Wanted to know if it was a maintenance problem or engineering problem if system is somewhat successful or what caused the failure?

- Mark Killar: We don't know if a different design would make a difference. It may not be the technology but some additional engineering needs developed to address the problem.
- Margaret Dunn: Asked Brent Means to clarify net acidic. BAMR has most of the problems. The ones that were successful were ALDs. Stream Restoration, Inc. has placed ALD's on net acidic water. Some have been working since 1996. Most systems with problems were those BAMR tried to treat net acidic without ALD.
- Amy Wolfe: Invited Brent Means to look at passive system on the North Branch of Robbins Hollow they have on DCNR and Bureau of Forestry land which is very successful and interesting in regard to fish life.
- Mike Hewitt: Feels that more water monitoring information should be made available on a database.

Discussion of the Need: Operation and Maintenance of Existing Facilities, Construction of New Facilities, Operation and Maintenance of New Facilities, Cost to Establish a Fund to Pay for Perpetual Treatment

- Pam Milavec: Passed out materials (O&M Work Group final recommendations and revised final OSM treatment system database). BAMR tried to predict future amounts of cost for O&M based on capital costs – were way over. Listed all systems and based cost on capital cost to predict how much money to put in fund for O&M (approximately \$77 million in capital costs for systems that have been constructed). Approximately four percent of capital cost spent annually over life of system. How much of this would be government's responsibility and how much locally? Determined that 35% should be handled locally and 65% from government funds. At present it would be two million needed annually.
- Rod Fletcher: Two million dollars is the annual need to support the existing systems. One way to accomplish this may be to estimate amount to put in a trust or bank account to generate two million per year. Bank account earning is approximately five percent. Second way is to have no capital on standby and find two million dollars each year, as needed.
- Bruce Golden: Another way is that we don't need to have \$46-\$50 million all at one time. They developed a spreadsheet that does these calculations to fund O&M and build up trust fund. Funds must be available when needed.
- Jon Deitz: There is a need to adjust for inflation.
- Brent Means: O&M maintenance is relevant to the BMR DMO trust fund program for passive and active treatment for coal operators. It is hard to figure these out and everyone is still struggling. Passive long-term treatment and recapitalization costs are very difficult to compute due to varied life spans.
- Rod Fletcher: Did include replacement systems in calculations.
- Bob Hedin: We have passive systems working for 12 years and the O&M costs are known. Now we can predict with much more confidence.
- Jon Dietz: We don't know how long the systems will last. Need 25 years on passive systems – some were designed for 25 year life (ALD's). We do not know on some systems yet. Some ALD's may show a steady decline in treatment

function. We will know in five to ten years - will have better information running a 25 year experiment.

- Dave Steele: Is there any consideration about separating O&M and replacement cost? We may need to develop separate cost criteria for each. He suggested that DEP try to come up with some monies now for those groups that need O&M.
- Pam Milavec: Maybe they should be separated.
- Bernie Walko: Who is responsible for O&M? Is the watershed expected to maintain the systems? We need some type of mechanism in place.
- Pam Milavec: It varies. The quick response is a WPACAMR grant to provide funds quickly to address emergency situations. BAMR in-house construction crews have also been considered. One could apply for a Growing Greener grant but may have to wait two years for the funds.
- Bernie Walko: A MOU could be entered into before the project is constructed, detailing the parties responsible for O&M.
- Pam Milavec: BAMR constructs system and develops O&M plan to define who is responsible.
- Rod Fletcher: Do you see BAMR constructing a system and not addressing O&M? The Department's support through grants is not the same – we need a definite plan. If BAMR constructs a treatment system, it will have a mechanism in place to operate and maintain the system. There needs to be a plan to guarantee that OM&R happens.
- Jon Dietz: Need to work with watershed groups. Groups have same dedicated five faces. The concern is on long term operation when this group may not exist. Is this a safe assumption – that DEP and BAMR will be there in the future?
- Dan Koury: Do we have staff assigned to meet these needs?
- Rod Fletcher: What are our needs?
- Pam Milavec: Watershed groups cannot handle O&M on their own. They need more expensive items that watershed groups can afford including the eventual replacements.
- Rod Fletcher: Is this discussion limited to passive systems?
- Pam Milavec: Yes, we need to do these separate (passive/active).
- Dan Helfrich: Every site needs an O&M plan. Not exactly who will do it but what needs to be done (sampling plan, water quality, SAC code, etc.). There should be a central repository for this information so everyone can go and get it.
- Bruce Golden: Need repository of information. A data sheet or spreadsheet should be available.
- Mark Killar: I looked at five treatment sites that are not working. BAMR probably also has some. As far as needs, long term need for sampling can be expensive. This may be a way for the state to assist in getting this done. The state lab is expensive – maybe we can work with local lab that is cheaper. Cannot possibly have watersheds be responsible for all maintenance, especially with multiple sites. Volunteers are mostly retired individuals and after-work volunteers. Need other organizations and local technical assistance (TAG) grants to assist.
- Bruce Golden: WPCAMR has a grant to assist with lab analysis.

- Nick Pinizzotto: Technical Assistance Grants help. We are not doing a good job now, what will we do with more money. How do we get money out quicker on problems?
- Pam Milavec: Mentioned TAG grant money – need to continue funding these.
- Tim Danehy: Can check to see if system is working, not just with sampling, but get pH and other field parameters. One does not always need \$40 lab analysis results to determine if the system is functioning properly.
- Bob Hedin: This whole discussion for O&M should apply both to passive and active treatment.
- Rod Fletcher: We need to go back to the agenda – how do we accomplish this not how to get the money out. Money is limited and we have more demands than what is available. How do you allocate the monies?
- Duane Feagley: Don't spend a lot on construction if you do not have the money for O&M.
- Mike Korb: I disagree – we may have new projects that are better than some that are already done.
- Rod Fletcher: Should highest priority be applying resources to maintain what already exists?
- Bruce Golden: This is situational.
- Rod Fletcher: Do we need to make sure we have O&M to take care of the system first?
- Response was Yes.
- Jon Dietz: What if you have a single project treating two percent of the flow. Should O&M monies be spent on the system? If no additional funds are available for new systems, we are spending O&M on a system that does not progress us towards the watersheds needs. He agrees that we should continue to maintain systems that are already constructed.
- Rod Fletcher: What we are discussing does not exclude these systems. Any system you deem worthy of operation needs money.
- Jon Dietz: Agreed
- Bruce Golden: He calculated that 35% (+ or -) of a 30% set-aside fund is needed for O&M. This is a rough estimate – about one third of the money could handle all passive systems' maintenance needs and the remaining two thirds for new projects.
- Dave Strong: Is this our only source of money? Should we only maintain existing systems? Are we still going to fund things like we did in the past with Growing Greener drying up?
- Duane Feagley: Agreed with Mike Korb. We may need to build new systems phasing out the old ones. We need to look at those with economic value. Use the treated water for economic purposes.
- Dave Steele: We need to look at local capacity, partnerships with departments or going out and getting other resources. Local support is very important.
- Dan Koury: Had question for Brent Means. For those systems that were minimally successful, was it because they were not reviewed/maintained? To put money into these without this information won't we be where we are now, again?

- Brent Means: It appeared that no one was looking after the systems, both the successful and the minimally successful ones. Same as successful ones – treated same. No one is doing much – taking a look and taking water samples. It is not due to negligence.
- Dan Koury: Some systems need tweaked but no one makes sure they are running properly. Do not have the resources to see if they are running efficiently. If they are replaced, could be back where we were before.
- Brent Means: If BAMR part of project, BAMR should have staff member assigned this work. There is no infrastructure to provide support to these systems. If BAMR puts monies toward the project, someone from BAMR should be responsible to check the system. Often times the locals are not aware that the system is not functioning properly.
- Rod Fletcher: My personal view - this is the responsibility of BAMR. The Department and Commonwealth are ultimately responsible when providing the monies. Not necessary to do it ourselves with BAMR employees but ensuring work gets done. Need a solution, not just BAMR, but what resources are available (watershed groups, etc.). We do not think nor is it reasonable for watersheds to get 100% of the responsibility.
- Bernie Walko: Senses reluctance to commit to long term maintenance on projects. Would it be better to have employee assigned (with all cost involved such as gas, etc.) and take monies away from construction projects? If we can depend on watershed groups to conduct some O&M, more reclamation will be accomplished.
- Bruce Golden: There must be an orderly succession with BAMR assistance.
- Bob Hedin: This we need to consider. Department needs to provide insurance policy if watershed people go away they will keep mechanism going.
- Rod Fletcher: You have more than insurance, we are partly responsible.
- Tom Clark: Reminded everyone not to forget the conservation districts and the housed watershed specialists that could provide operation and maintenance assistance to the watershed groups.
- Mike Korb: He believes that there is not much of a support mechanism for the watershed groups. He feels that the Commonwealth made a commitment but does not think OSM monies should be used. Commonwealth should have monies there for systems watersheds we committed to build. Feels BAMR should be technical partner but who built the system should maintain the system.
- Mike Hewitt: Schuylkill County was talking about hiring someone to operate and maintain their systems.
- Rod Fletcher: The question is not on who will do the job. If money is available, the job will get done. The question is : what is the need?
- Tim Danehy: Making sure what needs to be done on each system is important. There is a robust watershed management plan already in place. DMO and Regional Watershed managers have the knowledge and should look at the systems, at least once a year, to make sure pHs, etc. are being done. Should have database where they can track this work and make calls when necessary. Watershed groups should obtain and analyze samples four times each year. This can be done by volunteers rather than BAMR employees.

- Dave Steele: Conservation districts are in place and should be utilized. They need to be a critical part of additional funding.
- Pam Milavec: We have opportunities to partner with those who will maintain long term O&M both passive and active. We need to look into this more.
- Bob Hedin: Before discussing about money, 30% set aside, asked about BAMR's \$30 million in projects on the shelf. Where are we on the \$30 million and is it getting bigger?
- Rod Fletcher reviewed obligations and commitments of past several years.
- Pam Milavec: We have two treatment plants designed and ready for bid. The approximate cost is \$24 million (Hollywood and Lancashire #15). Need to keep in mind, along with cost, 62 miles of stream will be restored. The cost is high but value to Commonwealth is good. At Lancashire #15 much of the O&M will be paid by partnering with the Susquehanna River Basin Commission (SRBC). Norfolk Southern fines may be a possible source of partial O & M funding for Hollywood. There are two other plants proposed which are still in planning/development.
- Rod Fletcher: More accurately, no additional cost to the Commonwealth. Source of funding is between the Barnes and Tucker Trust handled by the Clean Streams Foundation and the SRBC. The fund is generating approximately \$500 thousand per year and the SRBC has established a trust fund of \$3.9 million. Revenue from the trust will be used to help operate the plant. Lancashire #15 – it is a must build , the commitment is the capital needed to build. We have money for O&M.
- Rod Fletcher: Pam has a handout that reviews the 10% set aside and spending. For Lancashire #15 we did not have a feel for the cost. It was based on Toby Creek and Brandy Camp Treatment Plants (approximately six million dollars). We had \$10 to 15 million on hand in 10% set aside monies. We did have enough on hand to pay for plant but as it developed, we ended up higher. The cost increased. Even if we had all the money on hand it may more desirable to phase expenditures over time. What we are investigating is having these projects included on the Commonwealth's Capital Budget (there is no fixed time frame – not a guarantee it will get done). We have ability to provide 100% of the required debt service so we should not have to compete with other projects. Advantage is that we don't have to pay all at one time.
- Bob Hedin: Questioned spending \$12 million to treat with chemicals on an alkaline discharge. A less expensive passive treatment system could be used in the 40 acre area adjacent to the Barnes & Tucker discharge. How does the Department pick technology?
- Rod Fletcher: That is one of the reasons we are here.
- Bernie Walko: Should take at least three candidates (systems) and do life cycle analysis.
- Rod Fletcher: Fairly standard engineering approach.
- Bob Hedin: There are multiple approaches in addition to lime to be considered. Need to compare technology to get best for our money.
- Pam Milavec: Knows Dan Sammarco did a lot of evaluation on this project, but she can't speak for him.

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- Bob Hedin: BAMR staff may not necessarily be experienced in many things (technology) available.
- Dan Helfrich: We do have focus groups for treatability, project selection, etc. We are open for input on technology. BAMR is trying to come up with an equal way to evaluate systems.
- Bob Hedin: Have anyone with new technology held to a higher standard – may need some financial surety. Everyone should be held to the same standard.
- Pam Milavec: We did talk about performance bonds.
- Rod Fletcher: Asked – bond on whom?
- Bob Hedin: Insurance products that handle long term liability – do not know cost.
- Pam Milavec: Different from what we presently do, which is design and put out for construction. Do you want to have company design and construct?
- Dan Helfrich: Can even put resource recovery into the cover cost for lime and O&M. Use as incentive.
- Clayton Bubeck: Performance standards – common practice in waste water, etc. Would need to be designed and built as one - needs to be written in policy.
- Pam Milavec: Negotiations with three companies - two coal and one power plant. Need to look at some systems where we could partner with someone who would establish trust fund for O&M. One idea is for Commonwealth to provide capital costs and the companies pay for the O&M costs.
- Bob Hedin: If you put this out on private industry (bid) you could see what people could do and what would be proposed.
- Jon Dietz: Agreed with Bob. Put high cost projects for high volume discharges out for RFP and see what different technology companies will present - will need performance standards. Performance standards will dictate what the costs will be.
- Bob Hedin: This should also apply to strip mine reclamation and acid material in refuse banks. Let industry come up with the solutions. We need innovative ways to treat water and move dirt.
- Jon Dietz: This should be determined on a project by project basis.
- Bernie Walko: If the performance standards are to stringent, bid costs will increase.

Delivery Mechanisms: BAMR Contracts, Grants, Trust Funds

- Pam Milavec: Heard some watershed groups are waiting for their money. Sometimes it may be more efficient for BAMR to do certain projects and others may be more efficient as grants.
- Dave Steele: Need to look at what has been effective in the past. Use local points of contact. Conservation districts can receive money and pay contractors and O&M - may need to look at other entities to be involved at some level. Need to delegate some of the responsibility of O&M down to county level. CCD's could contract or pass through monies. The Districts have the staff, maybe not for constructing large systems, but perhaps OM&R.
- Nick Pinizzotto: A Technical Assistance Grant is a good one. Also like idea of conservation districts – they know what their expertise is in. This could be good

for O&M. Watershed groups become more versed when TAG grants are available.

- Tom Clark: Need to prevent putting too much in the lap of watershed groups. BAMR should concentrate on larger problems and the watersheds on smaller scale projects. By not allowing watershed groups into the process, we will lose the smaller projects. Monies should be provided to the groups for these smaller projects.
- Rod Fletcher: Are you saying watersheds are not good for larger projects. What if we have a good watershed with ability to build larger projects and they submit a large scale project, what should we do? Watershed associations are largely unable to build large projects.
- Tom Clark: Yes, but that depends on the group.
- Nick Pinizzotto: Every project should stand on its own merit. If the watershed has the ability - should be able to make that decision.
- Bruce Golden: Prioritizing projects could be one of the most difficult jobs. Heads should be put together on prioritization. The Department should depend on the resources available in this room.
- Rod Fletcher: Some watersheds have received more resources than others – is this a reasonable approach?
- Nick Pinizzotto: Thinks Department is doing good job based on project merits.
- Mike Korb: Some watersheds are late bloomers or not a priority watershed and do not get the money. Maybe if priority was put on that watershed they could develop.
- Dan Koury: When developing priority watersheds the effort was focused on groups that were active and could identify their problems and offer solutions. Dan asked if any of these monies could go to GG process.
- Rod Fletcher: Legislature mandated a minimum of 60 million to acid mine drainage and mine cleanup and most of it is allocated. GG is not a permanent funding source. BAMR has done grants on a selective basis – project by project. Whatever we do in the future regarding grants would probably be on a project by project basis. It does not make sense to spend money to create and administer a new grant program. Most of our people have the technical expertise to develop and design projects. Administering grants means doing less projects.
- Dave Steele: This is where you could use conservation districts. CCD's could pick up some of this work. Mistakes have been made under Growing Greener when CCD's were pitted against the watershed groups. They should have local input into decisions and involvement in projects.
- Rod Fletcher: At the end of the day there is a greater demand than there is money. Who should get the money?
- Bob Hedin: Have we thought about watersheds doing reclamation projects?
- Rod Fletcher: No, not generally. We already have the staff. Many of these jobs are technical. Watersheds do not have capability to do in timely and costly manner. Watershed groups usually do not have people of this skill level. We have done projects with watersheds with Title IV monies. The big issue is we have three years to spend the money for each grant year. OSM has not enforced

this to date but the law says it can go back to federal government at end of three years. I would like to get this changed – removed.

- Bob Hedin: DEP has the staff to do \$50 million per year but what about when it increases to \$125 million?

Discussion on Obstacles to Watershed Restoration

- Rod Fletcher: Presented a handout depicting AMD treatment funds and other information. The first was a summarized the grants back to 1994. Note: 1994 was the first year Pennsylvania had ability to set aside ten percent. You will note some discrepancies because a portion of the grant was not eligible for ten percent. In 2006 we put out more than any previous year. The reason we could was we had funds from previous grants. In 2006, 2007 and 2008 it shows no set aside money. Since the grants are good for three years, we can exercise option to set aside money later. Does not believe we can afford to do that now. The second table shows what is left to be spent on Priority 1 and Priority 2 projects if 30 percent was taken for set aside.
- Rod Fletcher: Wanted to make a point – if this is all we have to rely on to spend in 2009 for Priority 1 and Priority 2 work – this is not what we want and not what is desirable. We may need to do at least one more year of no set aside.
- Bruce Golden: What is BAMR's administration cost?
- Rod Fletcher: It is believed to be 4-5%.
- Bruce Golden: Thinks that 4-5% is a low administration cost.
Rod Fletcher: If you look at grant application they create sub-accounts. One is titled administration where all personnel cost are entered. For example, Dan Helfrich spends 99.9 percent of his time designing projects – if you go to that sub-account, his time is under administration. Rod reviewed some items addressed when we were gearing up for the reauthorization. One was administrative cost in relation to our priorities which increased instead of decreasing. Wyoming has a low administrative cost. Rod pointed out that Wyoming only has five people, therefore, a low administrative cost but, in his opinion, their construction would also have administrative cost (consultants) which do not show.
- Tim Danehy: Construction is actual work contracted for (move dirt, etc.) – (Construction costs versus non-construction costs) so for every dollar on construction spent over one dollar was for administration?
- Rod Fletcher: The data is misleading for non-construction costs.
- Pam Milavec: We were receiving GG and BF money in same time frame and these charts do not reflect any of these construction dollars. Administrative cost also includes expenses for things such as sampling, aerial photography and mapping.
- Dave Steele: Do we have an idea of the balance of the 10% Set Aside at the end of 2005. Response was \$18 million. Dave asked if this would be enough to wait until 2010.
- Rod Fletcher: Yes, balance of \$18 million is income being generated and part is obligated to the treatment plants (existing).

- Pam Milavec: Operation of five treatment plants that were under the general fund monies are now paid under the 10% Set-Aside. Last year the set aside fund paid \$400 thousand in salaries. Includes time worked on AMD projects which is coded on employee timesheets.
- Rod Fletcher: Hollywood and B&T (Lancashire #15) – if we borrowed the capital for these projects that would create an annual obligation of \$2.5 million on this money.
- Dave Steele: Does the Department have option of setting aside one year and not the next?
- Rod Fletcher: Yes – can go back three years later and put monies aside.
- Tim Danehy: Has OSM defined adjacent yet?
- Rod Fletcher: No, not yet.
- Bruce Golden: With treatment plants if it can't go back to general fund it comes from 10% Set-Aside.
- Bob Hedin: How much monies were received from Growing Greener II?
- Rod Fletcher: \$60 million, BAMR received about \$35-40 million.
- Bob Hedin: Asked if the \$60 million was for AMD treatment.
- Rod Fletcher: No, the \$60 million is for AMD abatement and abandoned mine cleanup.
- Pam Milavec: Does not see us building more active treatment plants without outside funding source for O&M.
- Dave Steele: So you are saying passive?
- Rod Fletcher and Pam Milavec: No, would consider partnering with some outside source with funding for O&M – both active and passive.
- Dave Steele: If it doesn't come from somewhere else for treatment plants it comes from AMD Set Aside.
- Rod Fletcher: Hollywood – have not taken on cost of operation but it may end up being ours.
- Tom Clark: Has OSM come through on decision regarding projects adjacent to Priority 1 and Priority 2 sites.
- Rod Fletcher and Brent Means: No and we do not know timetable.
- Bob Hedin: Where did BAMR Growing Greener funding go?
- Rod Fletcher: BAMR money is committed – we used non-construction budget toward GG projects.
- Bob Hedin: Need more columns to reflect GG, BF, etc.
- Rod Fletcher: Every project with GG money also has Title IV money.
- Clayton Bubeck: Projected construction projects – are they designed now or are we looking at adding staff, or do we have staff available.
- Rod Fletcher: In 2006 we did \$50 million of projects with existing staff. If it becomes a challenge or crisis it will be considered. We have \$13 million in projects sitting waiting for funding. They are fully designed.
- Clayton Bubeck: When we get large amount will we have staff? Engineers are diminishing.
- Amy Wolfe: Wanted to know how GG monies were spent by BAMR.

- Rod Fletcher: BAMR is not responsible for GG program. You should contact Jackie Lincoln if you need more details.
- Amy Wolfe: Investments of DEP staff and others like we have with SRBC is something to look at in other areas. The Department should think of duplicating this. We should have task force (include SRBC, districts, etc.) to prioritize projects. Second, technical grants are good; they make good use of money available.
- Jon Dietz: We should have different funding mechanisms due to different flows and chemistry. Two issues – large flow discharges and other discharges – different ideas in design, contracting and O&M.
- Bob Hedin: It sounds like BAMR is set up to spend all this money without any set-aside. Where are we – not going to do AMD work? Will there be any set-aside and do we have any commitment to AMD projects?
- Rod Fletcher: Absolutely, we are going to set money aside. We still could go back and set aside monies for 2006. With regard to the future, we have not made any decision. It will be somewhere between the two extremes for the set-aside..
- Bruce Golden: Priority 1 and Priority 2 – current inventory of \$1.1 billion – is this just construction?
- Rod Fletcher: Yes, just construction. The \$1.4 billion figure is based on OSM's arbitrary adjustments to account for engineering and inflation.
- Pam Milavec: Moved on to permitting. Pam mentioned there was a focus group meeting on permitting last week (with Army Corp. included by conference call). They are pursuing regional general permit with Army Corp. The group will meet again in February and March and hope to wrap something up in May. This may be helpful – we hope. Regulation rewrite for Chapter 105 possible – looking at tier system.
- Tim Danehy: Met with Rita Coleman – waiver guidelines for Section 16.
- Tom Clark: Recommended that those who review the permits should take time and see the sites. This may help the approval process and save time on the back end of the review process.
- Clayton Bubeck: Need to minimize infiltration on abandoned mine lands – stormwater permit does not work with that theory.

Amy Wolfe: What will be the follow-up to this meeting?

Pam Milavec: Will get comments out in draft to everyone. They can correct and return and the final will be posted on web site.

Rod Fletcher: We need to use this as a to-do list for BAMR. It may be necessary and useful to have additional discussions. If you have any ideas, let me know.