

Mining Reclamation Newsletter



News Briefs

December 2003

ISSUE 4

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1. Purpose of Reclamation Newsletter

This newsletter is intended to facilitate communication to enhance the NR 135 program. It can act as a vehicle to broadly share information and address important program implementation issues and thus help maintain the balance between statewide consistency and appropriate flexibility/discretion. Another function of the newsletter is to address the on-going need to keep everyone posted on upcoming fee and reporting deadlines, training opportunities, conferences, Nonmetallic Mining Advisory Committee meetings and any other announcements. This newsletter will be published on an as needed basis but not less often than twice per year.

2. Topsoil Part II: Using Soil Substitutes for Nonmetallic Mining Reclamation

The feature article in this issue is a continuation of the discussion on topsoil substitutes and other materials that was begun in **Topsoil: Part 1**, (see article in the [March 2003 issue](#)). That article concluded by promising more information on plant growth material (topsoil, substitute topsoil, and other sources of reclamation materials (for backfill, grading, soil augmentation or enhancement - green manure, and physical or organic amendments). The emphasis in Part I was on the relationship between topsoil requirements and the reclamation plan. Because NR 135 contains no prescriptive standard regarding the depth of topsoil it is important that decisions on topsoil replacement depth be dictated by the post-mining land use. The reclamation plan is the proper place to make case-by-case decisions to account for factors such as the needs of the plants seeded or installed to support that land use. The reclamation plan is the proper place to address not only topsoil depth but also plant growth material quality as well as underlying materials in the reclamation plan. Decisions regarding topsoil management must come out of the process or reclamation plan development, proposal, review and approval (or conditional approval) of a reclamation plan.

In this issue, **Topsoil: Part II**, takes it a step further. While there is an obvious preference for the use of **natural** topsoil, subsoil and fill material that are generated on-site as part of the mining operation there is also an acknowledgement that there are cases in which this is not possible. It follows that it will sometimes prove necessary to obtain or create a substitute topsoil, subsoil or backfill for use in reclamation activities. Thus it is important to look at the array of options and their pros and cons in locating naturally available on-site materials or alternative materials that pose minimal threat to public health or the environment. **The emphasis of Topsoil: Part II is to explore the range of possibilities with regard to the sources of and use of topsoil substitute and other alternative materials in the reclamation on nonmetallic mine sites.** Such materials often are readily available and with care and planning can be approved with the reclamation plan. These may include, for instance, adding compost or other organic materials, whether processed on-site or obtained elsewhere, to topsoil or substitute topsoil. Check out the following article to get a head start on the locally available options. A little research and creative thinking may go a long way towards finding efficient and cost-effective methods to improve reclamation success.

[3. Fees Report: Report on the DNR Evaluation of the Reasonableness of Fees Compared with the Expenditures of Regulatory Authorities Administering NR 135 Nonmetallic mining Reclamation Programs in Wisconsin.](#)

During the rulemaking process used to develop Chapter NR 135, Nonmetallic Mining Reclamation, several stakeholders (nonmetallic mine operators and others in the regulated community) strongly expressed their concerns regarding the fairness of fees assessed on operators of active nonmetallic mines through the program. These fees are the source of revenue needed to administer county and local Nonmetallic Mining Reclamation Programs. In response to stakeholder concerns, NR 135.39(7) was drafted to require that the Department evaluate the reasonableness of fees and expenditures during the early part of the program implementation. The code also requires that after completing this evaluation and after consultation with the Nonmetallic Mining Reclamation Committee (NMAC), the Department must submit a report of their findings to the Natural Resource Board (NRB) by December 2003.

In response, the Department Regional staff evaluated 20 Regulatory Authorities (RA's) administering nonmetallic mining reclamation programs. These RA's were audited to determine if fees and program administrative expenses were in balance and reasonable. A wide range of data were obtained reflecting the degree of program development and the number of reviews of reclamation plans that have occurred to date. Given the early phase of program implementation, it is too early to make definitive statements about the level of fees charged, largely because most of the reclamation plan review costs have yet to be incurred. However, based on present information, acreage fees appear to be reasonable and to match expenditures incurred by regulatory authorities. It is, however, important to note that one cannot simply assume that the fees specified in the fee tables in NR 135.39, Table 2 would provide a minimum or "adequate" level of revenue for any specific county and local program. Indeed, there neither was nor is any limitation on RA's with regard to collecting adequate fees provided that the fees can be justified and documented.

The Nonmetallic Mining Advisory Committee (NMAC) is in agreement with the Department's report but also qualified its position to reflect the limitations of this early study. The report was presented to the Natural Resource Board (NRB) as an informational item during their October 22, 2003 meeting. The NRB did not request any follow-up. The NMAC, however, advised the DNR to continue to evaluate the fee matter and report back during or before October 2005 based on more complete information. At that time data from sources, including but not limited to, regular program audits, annual reports, or surveys of fees charged by RA's will be used to provide a more complete report on both the reasonableness of fees and revenue and expenditure balance.

4. **Announcements/ "Heads-up" - *Important Dates:***

- Fees collected from unreclaimed acreage are due to the DNR on **March 31, 2004**.
- Annual Reports from RA's to DNR due by **May 31, 2004**.
- Program Review Audits to continue this spring/summer. Look for a Newsletter article on preparing for an audit in the next newsletter.
- Next NMAC meeting to be held on January 29, 2004.
<http://www.dnr.state.wi.us/org/aw/wm/mining/nonmetallic/nmac.htm>

5. **Helpful Resources and Information Sources**

- An on-going goal of the DNR is to provide technical assistance necessary to support the county and municipal nonmetallic mining reclamation programs, while addressing the concerns and needs of mine operators. Informational materials including a program summary, Frequently Asked Questions and various publications can be found at the Department's Nonmetallic Mining Web site: <http://www.dnr.state.wi.us/org/aw/wm/mining/nonmetallic/index.htm>.

Of special interest:

- Developing & Reviewing **Reclamation Plans**
<http://www.dnr.state.wi.us/org/aw/wm/publications/mining/NonmetRecPlan.pdf>

Among the topics:

- Reclamation Plan Checklist, *APPENDIX A*
- Helpful Information and Resources, *APPENDIX B*
- Guide to Plant Selection, *APPENDIX C*
- Revegetation Success Criteria, *APPENDIX D*

- Preparing and reviewing **Financial Assurance**
<http://www.dnr.state.wi.us/org/aw/wm/publications/mining/NonmetFinAssure.pdf>

Among the topics:

- Helpful References, *ATTACHMENT A*
- Estimate Summary Table, page 7
- Calculation Worksheet (Excel file that will automatically calculate the dollar amounts is available from the DNR), *ATTACHMENT B*
- Typical Cost Estimates, *ATTACHMENT D*

- **Registration Form now available**

A [voluntary form](#) that may be used by landowners who wish to register the land containing a nonmetallic mineral deposit is now available on the nonmetallic mining reclamation web page, and [instructions](#) are provided for your convenience.

- 6. **Suggestion Box:** We welcome your ideas, questions and involvement. Please submit ideas topics for articles, issues you would like to see addressed including any outreach or training that is needed. Feel free to suggest anything - regular features that ought to be included in the newsletter, announcements of any meetings you'd like to notify the NR 135 population, etc. Responses can be emailed to Tom Portle (email: Thomas.Portle@dnr.state.wi.us)

Topsoil Part II. Using Soil Substitutes for Nonmetallic Mining Reclamation:

By Dave Misterek (Waste Management Specialist Northeast Region)

BACKGROUND

With the development of reclamation plans for nonmetallic mining sites in Wisconsin there is a growing realization that there may be a shortage of stockpiled topsoil or subsoil. With this realization comes a need to identify and obtain alternate sources for topsoil or subsoil for use in establishing vegetation needed for post mining land uses. In preparing a reclamation plan for a nonmetallic mine, one of the information items required is a description of the “topsoil or topsoil substitute material removal, storage, stabilization and conservation”. In addition, if soil or subsoil substitute materials are proposed for use as back fill they must be approved by county or local Regulatory Authorities as part of a site reclamation plan. Unfortunately, before reclamation regulations were in place many nonmetallic mine operators sold the available topsoil and subsoil reserves as the mine area was initially being developed. Even existing fill materials from site operations may have been sold rather than saved for reclamation. Too often in the past nonmetallic mining operations were aimed at use of the resource without thought to final site reclamation and post mining land use.

With NR 135 in place, current and future mine development will place a greater emphasis on preserving and maintaining stockpiles of original topsoil, surplus subsoil materials and general fill from mining operations. Currently, as many reclamation plans are being developed, shortfalls of topsoil, subsoil and fill materials are being identified. Along with this comes a need to be proactive in the development of reclamation plans that will provide final topsoil cover and subsoil materials in sufficient quantity and in a cost-effective manner. It is acknowledged that there are cases in which on-site topsoil and/or subsoil soils and general fill are not available due to past mining activities. In these cases it may become necessary to either purchase topsoil, subsoil and back fill from off site, or find alternatives such as creating or importing substitutes at a reasonable cost. However purchasing soil and fill from off site can be a

costly option. As a result, other options that were not originally considered feasible are now possible and may prove more cost effective than outright purchase of these materials.

This article will explore some of these options for “topsoil substitute material” (NR 135.03(24), as well as subsoil and general back fill substitutes and shed some light on various options to consider in the nonmetallic mine reclamation plan.

TOPSOIL AND TOPSOIL SUBSTITUTE MATERIALS

To simplify the matter, this article will concentrate on listing some of the more common materials that are readily available and may be considered as soil substitutes. As mentioned above, the topsoil or topsoil substitute material must be included in the approved reclamation plan. Final approval will depend on the site-specific conditions such as local geology, post-mining land use. In all cases, it is important to ensure that any soil or fill materials are permissible under existing state, federal or local regulations. Operators need to consider the regulatory framework when deciding whether or not to propose a soil or fill substitute and be aware if it requires separate approval by the DNR, Department of Agriculture or other state or federal agencies.

Some possible options for uses of soil substitutes or fill materials may be divided into the following general categories:

1. Topsoil
2. Subsoil used as a mid to lower rooting zone material below the topsoil
3. General fill material used as back fill below the surface necessary to achieve final site grades.

TOPSOIL SUBSTITUTES

As noted earlier, existing topsoil stripped from the original site and preserved for final reclamation is the preferred option. When this is not possible, topsoil substitute materials should

meet the higher standards associated with topsoil necessary to support post-mining vegetation. In looking at options for topsoil substitutes, certain soil criteria should be taken into account to enable a possible topsoil substitute to be considered for inclusion in a site reclamation plan. Remember that a proposal for “topsoil substitute materials” must be addressed in the reclamation plan. It must receive local approval from the county or local Regulatory Authority to ensure a good chance of success in establishing the soil and vegetation necessary to achieve the final land use designated in the reclamation plan. Please be aware that a proposal for use of poor quality sand, gravel or waste soil as a topsoil substitute will likely not be approvable and may jeopardize the success of revegetation and also retrieval of the financial assurance. A good topsoil substitute should exhibit some or all of the following characteristics:

1. Fine to medium grain size for water holding capability
2. Sufficient porosity for adequate aeration and drainage
3. Adequate organic content to promote nutrient and waterholding capacity, soil structure and tilth
4. Soil pH in the range of 5.5 to 8.4
5. Proper ratio of Nitrogen, Phosphorus and Potassium (N/P/K) for fertilizer value
6. Macronutrients (calcium, magnesium, iron) and micronutrients (copper, zinc, manganese, boron) necessary for sustaining plant growth.

Look for natural additives that will increase the value of the soil by replacing an ingredient that is lacking. For example if the soil were low in organic matter content, adding compost or manure would improve its value. If it is a question of soil texture, for example if the topsoil is sandy or gravelly, consider adding organic matter or fine textured (clay) soil to increase it’s water holding capacity. On the other hand, if the topsoil is brick hard clay adding sandy soil or organic matter (peat or compost) will help break it up and give it porosity. Consider adding commercial fertilizer to increase a nutrient value that may be lacking, or adding lime to increase the soil pH or gypsum to decrease it when necessary.

Based on soil analysis and the needs of the crop or the post mining vegetative community it may be necessary to amend the topsoil when topsoil or substitute soil are lacking. When options to obtain substitutes are being considered look for useful materials that may be available locally. For example, it may be possible to obtain compost from local municipal programs. Also, if space and time permit and a local source of suitable compostable materials is available, it may be possible to produce a compost product or substitute topsoil on-site during the operation. This can create a valuable addition and could cut costs.

COMPOSTING

An excellent topsoil substitute may be manufactured on-site by composting. Many larger municipalities produce large quantities of leaves, grass clippings and wood chips that may be available to you for use in compost operations. Local farmers may have excess manure or agricultural field wastes that they are happy to give to a good home. Combining these easily accessible organic materials into a windrow or pile is all that is necessary to create compost. Although efficient composting at a

commercial compost facility may be a highly technical operation, this level of complexity is not necessary for successful composting. A simple combination of brown and green organic material plus water and time is all that is necessary to produce a fine compost that can be



Topsoil redistribution during mine reclamation. Flambeau Mine. Ladysmith Wisconsin, Photo by Tom Portle

Consider having the existing topsoil or substitute topsoil tested to determine its qualities or deficiencies. If existing topsoil reserves are of poor quality they may be improved with soil additives including fertilizers or conditioners.

used as an ingredient of a first-rate topsoil substitute material. Brown materials may include organics such as dry leaves, yardwaste, corn stalks, straw and wood chips. Green materials may include grass clippings, food scraps, manure or fruit and vegetable wastes. Composting can be accomplished by combining a mix of approximately half green and half brown materials in a pile or windrow, mixing in soil or manure to add microbes to speed decomposition, maintaining adequate moisture from rainfall or other sources, and periodic turning to ensure aeration. Finished compost can be achieved in 3 to 12 months depending on compost maintenance and site conditions. Certain compost operations involving limited volumes of relatively clean materials such as leaves, grass clippings, yardwaste, wood chips, manure and agricultural field wastes may be exempt from Department licensing requirements and are candidates for use in nonmetallic mining reclamation. For additional information contact your regional DNR Waste Management Specialist or view Wis. Adm. Code NR 502.12 on the DNR Waste Management web site. For additional guidance on the art of composting, visit your local library, search the Internet or see "[For More Information](#)" at the end of this article. Also, there are references to the DNR composting publications accessible through the links provided at the end of the article. Be sure to include your composting proposal as part of your reclamation plan to receive approval from the county or local Regulatory Authority.

LANDSPREADING

Adding organic materials directly to the soil by landspreading (green spreading) is another option for improving existing topsoil or creating a topsoil substitute. Composted material, manure or many of the organic materials listed above in the composting section of this article may also be landspread directly on soils to improve site conditions. In some cases, landspreading, of specific wastes may be regulated by NR 518. This might include raising soil pH by use of water treatment lime or other wastes where reporting to the DNR might be necessary. In other cases, spreading of manure may be regulated by NR 151 to protect the environment.

Landspreading on poor soils may increase soil fertility and organic matter as well as improve soil structure thus drainage and porosity. In time, natural soil microbes aid in the decomposition of the added organics to improve the overall quality of the soil. Again, the Department has provided an exemption for landspreading most of the above organic materials as long as the products are applied as a soil conditioner or fertilizer in accordance with accepted agricultural practices and the landspreading is operated and maintained in a safe, nuisance free manner. As with any soil substitute proposal, the landspreading plan should be included in the reclamation plan and receive approval from the county or local Regulatory Authority. (*Please see "[For More Information](#)" at the end of this article*)

SUBSOIL SUBSTITUTES

A quality subsoil should be proposed in a reclamation plan to provide a rooting zone for site vegetation. Many trees, shrubs and non-woody vegetation species such as prairie grasses and forbs have extensive root systems that may grow down to a depth of 15 to 20 feet or more. Therefore, providing suitable subsoil material to a reasonable depth below the topsoil should be considered for establishing and supporting a healthy growth of vegetation on-site. In most situations providing only 2 to 4 inches of topsoil over backfilled material will not produce a viable and long lasting growth of vegetation including grasses, shrubs or trees. (*Please see DNR Reclamation Guidance PUBL-WA-834 2002 including references found in Appendix B, Part 7, if you need information on rooting requirements of specific plant species.*)

Subsoils should have characteristics reasonably similar to those for topsoil (noted above) and be capable of sustaining a healthy growth of plant roots. The depth and quality of subsoil will depend in part on the final land use and type of vegetation proposed in the reclamation plan. Ideally the subsoil should have characteristics similar to the topsoil to be used on-site but a lower quality subsoil may be acceptable as long as it is composed of soil or subsoil material that will sustain a healthy growth of plant roots. Subsoil substitute material may be comprised of a combination of sandy, gravely or clay textured subsoil that does not meet the higher standards of

topsoil. The quality is not as critical as that of topsoil because it is used mainly for rooting zone material and therefore functions to increase the water supply available to roots and minimizes the effect of drought.

GENERAL FILL (BACK FILL) SUBSTITUTES

General backfill material may be any surplus materials resulting from site operations such as uncontaminated sand, gravel, rocks, clay, soil, subsoil or other overburden materials. Clean soil or subsoil or overburden materials generated on-site may be used as backfill without prior approval from state or local authorities.

Other clean fill materials may also be used as backfill. By rule, the Department has designated some waste materials as “clean fill” and has exempted these materials from regulation (*Please see link to NR 500.08 available at end of the article*). These materials include clean soil, brick, building stone, concrete, reinforced concrete, broken pavement, and unpainted or untreated wood. The exemption is conditioned on use of these waste materials in a nuisance-free and aesthetic manner. It is important to note that an "exempt" material may be appropriate for one use but not another. Again, any use of exempt materials as backfill in the mine must be proposed in the reclamation plan and receive approval from the county or local Regulatory Authority. All materials proposed as fill need to be approved as part of the reclamation plan and substitute materials (not obtained from the site) may also be subject to state or federal approvals. For example, other waste materials are prohibited by state code from use as clean fill if they pose a threat to human health or the environment. These materials are regulated as solid waste and include but are not limited to items such as rubbish, garbage, building construction or demolition wastes, tires, treated or painted wood, plastics, furniture, drywall, metals and contaminated soils. (*Please see "For More Information" at the end of this article*). Remember a nonmetallic mine is not a landfill.

BENEFICIAL USE OF INDUSTRIAL BYPRODUCTS

In some cases it may be possible to propose a select industrial byproduct (foundry sand and slag, coal ash, and paper mill sludge) for use such as for a sand source when creating substitute topsoil, subsoil or general back fill. Any proposal must meet specific requirements of Beneficial Use of Industrial Byproducts under NR 538. This code limits the amount of contaminants the waste product contains and the proposed use. Although the use of industrial byproducts for soil substitutes is not specifically listed as a beneficial use under NR 538, the Department is able to review and approve of such requests on a case-by-case basis. NR 538 prohibits the use of substitutes that may pose a threat to public health or the environment.

Depending on the circumstances it may be possible to use a select industrial byproduct material if it is relatively free of contaminants and is used in a manner that does not pose a threat to human health and the environment. The industrial byproduct material must be characterized using standard waste characterization tests and the proposed use identified. We recommend that you contact your regional DNR Beneficial Use Contact to learn more about options for beneficial use of industrial or commercial byproducts that may be available in your area. (*Please see "For More Information" at the end of this article. You can find your regional Beneficial Use program contact below.*) In all cases the applicant must also receive approval from the county or local Regulatory Authority as part of the reclamation plan review.

SUMMARY

To obtain the best results in nonmetallic mining site reclamation and to minimize additional regulations, we recommend the use of natural topsoil, subsoil and fill material generated on-site as part of the mining operation. When it proves necessary to create a substitute topsoil, subsoil or backfill in reclamation activities, it is usually best to focus on naturally available materials that pose minimal threat to public health or the

environment. In addition, such materials often are readily available and easily managed as part of a composting or landspreading operation to aid in site reclamation. Consider the options noted above to find an efficient and cost-effective method to improve reclamation success.

FOR MORE INFORMATION

► Administrative Codes

- NR 500.08 – Exemption from Solid Waste Regulations
- NR 135 [Chapter 135](#) - Nonmetallic mining reclamation
- [NR151](#) - Manure & Runoff Rules
[NR151 Strategy](#)
- NR 502 - Solid waste storage, transportation, transfer, *composting*
- NR 518 – Landspreading of Solid Waste
- NR 538 Beneficial Use of Industrial Byproducts
<http://www.legis.state.wi.us/rsb/code/nr/nr538.pdf>

► Composting

<http://www.dnr.state.wi.us/org/aw/wm/publications/recycle/publsw072.pdf>

► Beneficial Use

- **DNR Waste Management Program Beneficial Reuse Program**
<http://www.dnr.state.wi.us/org/aw/wm/solid/beneficial/index.html>
- **Beneficial Use Guidance Document**
<http://www.dnr.state.wi.us/org/aw/wm/publications/beneficial/PUBLWA822/WA822.pdf>

Guidance on beneficial use of industrial byproducts including the use of industrial by-products got rolling in 1985, when legislation was enacted encouraging beneficial use of **fly ash, bottom ash, paper mill sludge, and foundry system sands and slags**. DNR encourages the beneficial use of suitable industrial by-products in order to preserve resources and conserve energy. NR 538 establishes standards for **five categories of**

industrial byproducts and describes appropriate **use methods** appropriate for each category.

- [Beneficial Use Contacts](#)

► **Reclamation Guidance Document**
[PUBL WA-834 02](#) - "Guide to developing reclamation plans for nonmetallic mining sites in Wisconsin."

► Other Programs:

- Watershed Bureau [Runoff Management|Watershed Bureau|Water Division](#)
[Watershed Runoff web page](#)
[Rules Implementation Strategy](#)
- [Runoff Management & Manure Management](#)

All livestock and poultry operations in Wisconsin, regardless of size, must abide by the agricultural performance standards and four common-sense manure management prohibitions. The performance standards and prohibitions are required by [NR151](#).

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Fees Report: Report on the DNR Evaluation of the Reasonableness of Fees Compared with the Expenditures of Regulatory Authorities Administering NR 135 Nonmetallic Mining Reclamation Programs in Wisconsin.

By Tom Portle

INTRODUCTION

During the consensus rulemaking process used to write Chapter NR 135, Nonmetallic Mining Reclamation, several stakeholders (nonmetallic mine operators and others in the regulated community) strongly expressed their concerns regarding the fairness of fees assessed on unreclaimed acres. Operators pay fees, on an annual basis, to county and local regulatory authorities that have passed reclamation ordinances establishing NR 135 reclamation programs. These fees are the source of revenue needed to administer such Nonmetallic Mining Reclamation Programs. In response to the aforementioned stakeholder concerns, NR 135.39(7) was drafted to require that the Department evaluate the reasonableness of fees and expenditures during the early part of the program implementation. The code, NR 135.39 (7), required the Department to submit a report of their findings to the Natural Resource Board (NRB) after completing this evaluation and after consultation with the Nonmetallic Mining Reclamation Committee (NMAC).

OVERVIEW AND METHODS

During the Summer and Fall of 2002 the NR 135 subteam met several times to plan the fee evaluation process and develop and finalize audit checklist and forms for use in 2003 audits. The program audits were conducted between May and early August, 2003 for some 20 counties and municipal Regulatory Authorities (RA's) were audited. Information and data gathered during the audit process were used to prepare this Fee Report which was then reviewed and discussed by the NMAC during its September 11, 2003 meeting. Finally, the [Fee report](#) was presented to the NRB at its October 21 & 22 meeting.

RESULTS, DISCUSSION AND CONCLUSION

A wide range of data were obtained reflecting the degree of program development and the number of reviews of reclamation plans that have occurred to date. as well as Department staff feel it is too early to make definitive statements about the level of fees charged, Acreage fees as

evaluated by the audit conducted to support this report, appear to be reasonable and to match expenditures incurred by regulatory authorities. Given the early phase of program implementation, many RA's felt it was a too early to say anything definitive largely because most of the costs for reclamation plan review have yet to be incurred. Indeed, in most cases where there appear to be surplus balances, the RA's attribute this to a large backlog of plan review, which is expected to consume any apparent surplus balance largely because most of the reclamation plan review costs have yet to be incurred.

However, based on present information, fees generally appear be reasonable and to match expenditures incurred by regulatory authorities

INHERENT VARIABILITY

Addressing the question of reasonableness of fees is anything but straightforward. Costs may vary from one regulatory authority (RA) to another due to a variety of factors. This variation may result from the wide range of physical factors - geological, hydrological, mine types (quarry/ consolidated versus sand or gravel pit/unconsolidated) as well as local socioeconomic factors. To illustrate this, consider the problems with comparing a jurisdiction with a predominance of dry bluff-top quarries (relatively stable in terms of acres being mined) with short term, dynamic sand and gravel operations in another jurisdiction. Thus, it is not meaningful to make simple comparisons among jurisdictions (RAs). That is to say, there is no basis to assume that fees that are reasonable in one jurisdiction can be realistically compared to another jurisdiction. Likewise, there is no basis to assert that fees that are reasonable in one jurisdiction are necessarily adequate or inadequate to offset administrative costs in another.

BACKLOG OF RECLAMATION PLANS

When administration of the Nonmetallic Mining Reclamation program was begun by RA's, "automatic" reclamation permits were granted to all existing operations that applied to their county or local RA. A condition on this permit was that

operators submit full and detailed reclamation plans between one and two years after that date. This approach allows to allow mining to continue while providing operators sufficient time to prepare plans and regulatory authorities the chance to get their programs up and running. The other advantage was that RA's could exercise some control of submittal dates so as to result in an orderly plan approval process. Unfortunately, regulatory authorities often did not avail themselves fully of this option and many ended up with large backlogs of reclamation plans and are facing a very busy last year (in most cases the reclamation plans need to be approved by fall of 2004). In such cases, any apparent surplus balances may reflect only the presence of this backlog in reclamation plan reviews. For this reason both the apparent surpluses that exist as well as the marginal or deficit situations that RA's are now in with regard to their funding may become deficits as they address their own backlogs.

CAUTIONS

There are several cautions that should be borne in mind when evaluating reasonableness of fees. First, it should be kept in mind that the fee tables were developed in 1998. Any assumption that the DNR tables in NR 135.39 reflect the "high end" or could be used as a "fee ceiling" becomes increasingly less defensible when considering the general cost increases that have occurred in the intervening 5 year period and which will continue with the passage of time. When the fee tables for the code were developed the general assumption was that the DNR costs presented in NR 135.39, Table 2, would be on the "high end". This was largely due to transportation costs that were assumed to be significantly higher for the DNR than for those likely to be incurred by county or local RA's (presumed to be located close to the mining operations). Indeed, the DNR table was considered to be a de facto "ceiling" level - if an RA were to exceed this level they ought to be able to document why. Secondly, with regard to the 20 RA's that were audited for this report, one should keep in mind that some were selected largely because they appeared to have high fees and so are not necessarily representative of the fees assessed by the statewide array of regulatory authorities administering Nonmetallic Mining Reclamation programs. Data presented supports the general consistency and fees and is a better indication on this point.

On the other hand, one cannot simply assume that the fees specified in the fee tables in NR 135.39, Table 2 would provide a minimum or "adequate" level of revenue for any specific county and local program. Indeed, there neither was nor is any limitation on RA's with regard to collecting adequate fees provided that the fees can be justified and documented. In fact, it was anticipated that there would be occasions where the RA costs would be higher but, again, it is incumbent on the RA to document their rationale.

In cases where the fees exceeded NR 135.39, Table 2, the audited RA was usually able to document costs or show that the surplus was in place in anticipation of the expenditures that will be incurred due to the extensive backlog of reclamation plans that still need to be reviewed. On the other hand, in cases where fees appear to be inadequate it is typical that this is done by choice of the RA or its Board (usually the county board). This is generally due to a desire to hold down costs to industry or due to a belief that since the industry benefits the common good, regulatory costs could be partially offset by public funds.

In conclusion, fees as evaluated by the audit conducted to support this report, appear to be reasonable and to match expenditures incurred by regulatory authorities. Given the early phase of program implementation, many RA's felt it was a too early to say anything definitive largely because most of the costs for reclamation plan review have yet to be incurred. Indeed, in most cases where there appear to be surplus balances, the RA's attribute this to a large backlog of plan review, which is expected to consume any apparent surplus balance. Given that the backlog in reclamation plan review is probably an issue for most jurisdictions it is likely that those balances which appear close or in a deficit will also be affected by the backlog problem increasing the number of RA's across the state that may find themselves in deficit situations. DNR regional staff who conducted the audits determined that RA's were doing a good job, often with limited resources; that expenditures were documented and appeared reasonable; and finally that any surplus was due to the backlog of reclamation plans that will soon need to be reviewed and is expected to exhaust any surplus funds. Finally, as alluded to above, RA's that are now in marginal or deficit situations with regard to their funding may experience deficits as they address their own backlogs.