

CHAPTER TWO

Monitoring Borrowers

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The primary purposes of the Clean Water State Revolving Fund Program (the “CWSRF”) and the Drinking Water State Revolving Fund Program (the “DWSRF”) are to provide perpetual funding mechanisms for states and their political subdivisions to meet environmental protection objectives through water and wastewater infrastructure improvements. Given the fact these programs represent an investment of federal and state taxpayer dollars, it seems prudent that individual state programs provide for a method of monitoring borrowers in order to ensure the integrity and perpetuity of their state-level CWSRF and DWSRF programs.

The CWSRF and DWSRF programs are a substantially different style of federal assistance program as compared to their predecessor, the clean water construction grant program. While the grant program dictated a “top down” command and control approach to funding infrastructure development, the CWSRF and DWSRF place most of the responsibility for the programs with each individual state. Each state is free to structure their respective state-level programs within the parameters of the federal laws and regulations. Consequentially, it is not surprising that the level of monitoring may vary widely from one state to the next. In fact, the financial and technical functions of monitoring may actually be divided among two or more entities in some states, while other states may have more than one agency providing almost redundant monitoring in either or both functions. The purposes of this chapter are: first to identify the reasons monitoring may be important, then to determine what parties may or should be responsible for monitoring, and finally, to evaluate the various methods of monitoring that can be applied, including the coordination of different types of monitoring.¹

Section One - Reasons for Monitoring

Any system of monitoring must simultaneously balance the legal need for monitoring with the availability of limited resources to actually perform the monitoring. Therefore, the first critical step is to identify the factors that drive monitoring requirements. Subsequently, the program can identify the benefits and costs associated with meeting the appropriate requirements, as well as the associated risks of not monitoring borrowers.

¹ Unless otherwise cited, the information for the numerous state-level program examples was compiled from responses by CIFA member institutions to a “CIFA Member’s Survey/Material Request” disseminated January 31, 2001 (the “CIFA Survey”).

Factors Driving Monitoring

Legal Requirements

Legal requirements include the federal Clean Water Act², the federal Safe Drinking Water Act³, and the associated rules and regulations promulgated thereunder⁴. While the federal laws do not mandate a specific level or method of monitoring, they do set forth the inherent program rules and guidelines that each state program must operate within, including the mandate to “maintain the fund in perpetuity”. Additionally, each state must enact authorizing legislation to implement the CWSRF and DWSRF Programs, and a review of the state law is necessary to determine what, if any, priorities may be placed on monitoring. Although the statute does not specifically require borrower monitoring, borrower monitoring may in fact be necessary. For instance, state authorizing legislation may call for an annual audit and accounting of all monies within the fund. On the face, this seems to be limited to the state-level program. However, if all monies are obligated and/or expended by a pool of borrowers, the state-level program may need a variety of borrower-level information to comply with the statutory mandate.

Cross-cutting state and federal laws also play a role in determining monitoring requirements. Examples are the federal cross-cutting laws⁵ that apply to the CWSRF and DWSRF Programs. Individual states may also have laws that are applicable to the financial, environmental, or technical aspects of CWSRF and DWSRF projects. Examples would be laws relating to the expenditure of public funds and requiring periodic audits thereof; laws governing construction methods or standards applicable to water and wastewater treatment facilities and laws relating to water quality standards. The list of potential cross-cutting authorities can be imposing. Whether or not those authorities somehow obligate the state programs to verify that their respective borrowers are in proper compliance with those authorities is the important consideration.

A third source of legal requirements is each state’s Operating Agreement(s) with the United States Environmental Protection Agency (the “EPA”). This important document may set forth specific monitoring requirements as conditions for receiving a capitalization grant award. Failure to meet these requirements may result in disqualification from consideration for future capitalization grants.

Bond Covenants

Many states issue obligations of indebtedness to provide state matching funds or to provide “leveraged” funds in excess of the capitalization grant and state match amounts in order to meet additional demand for CWSRF or DWSRF funds. These financial obligations may have varying characteristics relating to amounts, maturities, and methods of repayment; the specifics of which

² Title 33 U. S. C. A §1251 et seq. ; Subchapter VI relating to State Water Pollution Control Revolving Funds comprises §§1381 to 1387.

³ Title 42 U. S. C. A. §300f et seq. ; Part E relating to state revolving loan funds comprises §300j-12.

⁴ Generally, 40 CFR Part 35.

⁵ A list of cross-cutting laws applicable to the CWSRF can be found at 40 CFR §35. 3145; a list of cross-cutting laws applicable to the DWSRF can be found at 40 CFR §35. 3575.

are set forth in some form of **bond or note indenture**⁶. A state may have one or more indentures as part of its CWSRF and DWSRF programs. Under these indentures, the state, acting through its issuing agency or other political subdivision, may make certain covenants and pledges in order to secure repayment of the obligations, achieve or maintain credit ratings, and enable investors to exclude the interest paid on the obligations from federal and/or state income taxes. These covenants may require certain levels of monitoring on any borrowers that receive proceeds of the debt issuance in order to comply with applicable laws and regulations related to the issuance, as well as any requirements to provide disclosure documentation to investors.

Disclosure obligations usually include the reporting to state and national information repositories of “**material events**” pursuant to SEC Rule 15c(2)-12⁷; the following events are some typical examples of those considered to be material events:

1. Principal and interest payment delinquencies;
2. Non-payment related defaults;
3. Unscheduled draws on debt service reserves reflecting financial difficulties;
4. Unscheduled draws on any credit enhancements reflecting financial difficulties;
5. Substitution of credit or liquidity providers, or their failure to perform;
6. Adverse tax opinions or events affecting the tax-exempt status of the bonds or notes;
7. Modifications to rights of the holder of the bonds or notes;
8. Bond calls;
9. Defeasances;
10. Release, substitution, or sale of property securing repayment of the bonds or notes;
11. Rating changes.

Additional borrower financial information may be required for disclosure if a single borrower receives a significant portion of the bond proceeds or if any other disclosure requirements are agreed to or become necessary by law. For example, the **Ohio Water Development Authority** requires local governments that represent more than 20% of the security for a specific bond issue to either comply with the disclosure requirements themselves, or provide the Authority with financial statements and any other required disclosure information.

Resource Limitations

Available human and financial resources play a crucial role in determining the extent of monitoring performed within a state’s programs. A state may or may not authorize or allocate to a program sufficient staff with the appropriate technical training in the financial, environmental, legal, or engineering fields, to administer a large-scale monitoring program. Additionally, sufficient funding may not be available to maintain extensive monitoring of borrowers for the duration of their loans. Each state must allocate its limited resources to best serve the priorities of the state, and in certain cases, the state-level decision making bodies may deem such a

⁶ See Chapter IV, Managing Money; Investment Products and Strategies for a more in depth discussion of bond and note indentures and their relationship to CWSRF and DWSRF program structuring.

⁷ 17 CFR §240. 15c2-12; promulgated by the Securities and Exchange Commission under the Securities Exchange Act of 1934, 15 U. S. C. A. §78a et seq.

monitoring program to fall below other state priorities, and limit resource allocations. Consequentially, any monitoring system must be designed to achieve the most benefit at the least cost, given the availability of human and financial resources.

An important related consideration is the concept of diminishing returns. The perfect monitoring system would have access to all information, immediately, in an ideal and easily manageable format. This perfect system would also cost so much and require so much effort that the program would likely fail despite itself. The key strategy is to marshal the limited available resources to the monitoring efforts that will yield the most valuable information, in order to identify projects that may develop problems so that more extensive monitoring efforts and perhaps remedial actions can be focused on only those projects that may warrant closer scrutiny. In making this calculation it is helpful to remember that the CWSRF and DWSRF have historically been very sound lending programs, if anything more conservative than what might otherwise be considered necessary. Of the literally thousands of CWSRF and DWSRF loans made since the inception of the programs, there have thus far been no un-cured defaults. Solid lending practices contribute a great deal towards reducing the potential risks associated with making loans, and certainly suggest a factor that can be weighed in the assessment of how much monitoring is prudent and advisable⁸. However, economic or political circumstances for a borrower can often change rapidly. Therefore, it is also prudent and advisable to at least maintain the ability to monitor when appropriate.

Benefits and Costs Associated With Monitoring Borrowers

The primary benefit of monitoring borrowers is the ability to provide for the long-term integrity of the program. If the goal of “maintaining the fund in perpetuity” can be defined generally as always having within the fund the sum total of all capitalization grants and state match funds (less any set-asides, of course), then the primary obstacle to achieving such a goal is a borrower’s ultimate failure to repay CWSRF and DWSRF loans.

There are several other benefits that result from effective monitoring programs. Perhaps the most important of these benefits is to ensure the best and proper use of the public funds that comprise the CWSRF and DWSRF programs. Not only are the programs initially capitalized with public funds, but loans made to local borrowers are ultimately repaid by a wide variety of public funds, including utility usage charges and direct taxation of sales, income, or property. Therefore the benefit of monitoring is not only to the taxpayers funding the CWSRF and DWSRF programs, but also the ratepayers and taxpayers who utilize the water and wastewater improvements funded through the programs.

An effective monitoring system can also lead to lower costs for those programs that choose to issue obligations of indebtedness. When the repayment of program loans is the revenue source for repayment of obligations, a paramount concern of any program investor is loan repayment. An effective monitoring system, geared to identify potential credit problems with borrowers, can lead to higher credit ratings for the program, which directly reflects a lowered associated risk for investors. The investors will, in turn, be willing to accept a lower interest return on their

⁸ Limited resources may prevent the program from effectively monitoring individual borrower but may allow a program to monitor a large class of borrowers that stay within an acceptable risk margin. This concept of “portfolio monitoring” is developed further in *Financial Monitoring* subsection, infra.

investments, which directly converts to lower interest costs to the program that chooses to issue its obligations of indebtedness. These interest cost savings can ultimately be passed on to program borrowers.

Borrower monitoring also can generate a large volume of data that can be used in many ways. A historical analysis of borrower information can help evaluate a particular borrower's capacity for future loans. The information can also help to identify future infrastructure needs of a particular borrower. Cumulatively, the information generated can help determine future demands for infrastructure funding, thus allowing for more accurate forecasting of the capital needs of the programs. Such information can be used to identify common tendencies among borrowers that, in turn, can be used to develop improved and more proactive monitoring techniques that can perhaps further reduce program risks. Additionally, the information represents a source of data that may be of interest to the general public, whether for oversight purposes or for raising public awareness of infrastructure needs and environmental considerations.

Monitoring programs are not without costs. Depending on the state, the costs of monitoring may be borne by the state taxpayers through appropriations, carried within the program through set-asides, shifted to the borrowers through administrative and other loan fees or some combination of the three.

The primary costs of monitoring are staffing and funding. These costs are not unrelated. Funds must be available to hire staff; funds must also be available to provide staff with the proper tools and training to administer a monitoring system. Some states may restrict the number of employees that a program may hire; this directly affects the ability to maintain a larger, more comprehensive monitoring system because employees may be needed to administer other aspects of the CWSRF and DWSRF programs, or may have other unrelated duties as well. Outsourcing monitoring responsibilities may provide a solution. However, this also requires adequate funding. Besides staffing, other major cost drivers are technology for information management and travel for on-site project visits. Funding may or may not be adequate for these often necessary elements.

Perhaps a less obvious cost associated with monitoring borrowers is the actual or perceived intrusion of governmental oversight. Actual intrusion can occur because monitoring requirements require work on the part of borrowers, each with their own funding and staffing concerns, to collect, process and forward the required information. While this oversight may be justifiable and reasonable, care must be taken not to cause a perception or a reality of excessive intrusion, which can result in failure for local borrowers to cooperate with monitoring requirements and may also cause potential future borrowers to not participate in the CWSRF and DWSRF programs. CWSRF and DWSRF programs must balance the monitoring requirements with borrowers' reasonable abilities to meet those requirements.

Associated risks of Not Monitoring

The risks of not monitoring borrowers are varied, but all result in a common theme: harm to the program. Failure to adequately monitor borrowers can ultimately result in a failure of the borrower to repay a loan. A borrower's default on a program loan has several negative effects. First, the total available funds for making new loans is reduced. That means that a prospective

borrower may have to wait or find alternative funding sources to finance their project, which in turn means delays in making needed infrastructure improvements and the resulting potential health and safety risks associated with those delays. The delays may also mean additional cost to complete the project if the prospective borrower is unable to take advantage of the CWSRF and DWSRF programs' below market rates. Second, a default can result in considerable administrative expense to the program by resulting in collection and other legal proceedings brought to recover program funds.

Third, a default may ultimately lead to higher costs of borrowing for all other program borrowers, especially if a program issues its own debt to fund loans. Potentially, lowered pool credit ratings because of one bad credit in the pool, could impact on the borrowing costs of the entire pool. In the worst case, a borrower default that causes a default on program debt may severely diminish the program's ability to provide adequate funding through future debt issues.

Failure to adequately monitor borrowers can also result in the misuse of funds for non-CWSRF or non-DWSRF purposes.⁹ Although such unauthorized uses might ultimately be repaid, funds that could have been utilized for needed water and wastewater improvements by other borrowers would instead be tied up in unauthorized and possible illegal activities. Moreover, the potential scandal and embarrassment, as well as the inevitable public scrutiny, that may arise out of a default or misuse of funds, may represent a leading motivational factor for developing a monitoring program sufficient to avoid such undesired occurrences. Unauthorized uses of funds may also further complicate matters when a program has issued debt obligations. If the proceeds of such obligations are used in an inappropriate matter, it may violate federal and state tax and security laws, initiate investigation and possible enforcement actions by the Internal Revenue Service, the Securities and Exchange Commission, or the state Attorney General, as well as endanger any tax-exempt or private activity status on the obligations.

Section Two - Parties Responsible for Monitoring

Lending Agency

The lending agency is the most obvious entity responsible for any monitoring. As noted earlier, the lending agency may be directed by specific state statutes, through its operating agreement(s) with EPA, or its bond and note indentures, to perform certain required monitoring tasks. The lending agency, for management and control purposes, may also develop a more comprehensive

⁹ The concept of "misuse of funds" generally refers to the utilization of program funds for costs other than those specifically approved for a particular project. These unauthorized costs might range from project-related costs that are merely outside the scope of the approved project to the use of funds for non-water/wastewater projects and all the way to theft, embezzlement, or other misappropriation by a borrower or its officials. Costs outside the approved project scope might potentially be ineligible costs of land, labor, or materials, ineligible administrative expenses, costs incurred for the sole benefit of a private activity, or project construction contrary to approved plans and specifications. As an example, the Louisiana DWSRF restricts the amounts that can be paid to legal counsel or financial advisors out of loan proceeds. Any costs above those amounts must be paid by the borrower out of other funds. Also, certain states' programs authorize the use of program funds to make loans for purposes that may benefit a private activity, while other states expressly forbid such a use of funds. The applicable state and federal statutes, regulations, and guidelines provide guidance as to what costs may be paid from CWSRF or DWSRF funds.

monitoring system in implementing its CWSRF or DWSRF program. Such monitoring systems may contain extensive monitoring of all aspects relating to CWSRF and DWSRF projects.

Trustee Banks

Trustee Banks may take on monitoring responsibilities pursuant to bond and note indentures entered into with the lending agency when it issues its obligations, or as a local trustee pursuant to a trust agreement entered into with the local borrower. The trustee bank may or may not be willing to take on a wide variety of monitoring responsibilities, however, most monitoring responsibilities usually relate directly to repayment of CWSRF and DWSRF program loans. The trustee bank may also, on certain occasions, assume responsibility for meeting any disclosure obligations to program investors.

Other State or Local Agencies

Other state or local governmental agencies may be directed by statute to perform certain functions, either in coordination with the CWSRF and DWSRF programs, or entirely independent of the programs. This is often the case where another agency may have a recognized expertise relevant to some aspect of the CWSRF and DWSRF programs. For example, in the State of Oklahoma, even though the **Oklahoma Water Resources Board** administers the CWSRF program, the **Department of Environmental Quality** is recognized as having the technical expertise to review construction plans relating to wastewater treatment projects for compliance with state construction standards. While the Water Resources Board reviews plans for compliance with CWSRF program guidelines, the Department of Environmental Quality reviews plans to determine if they will technically work.

Many other states have similarly divided CWSRF and DWSRF program responsibilities. The North Dakota CWSRF and DWSRF programs are administered jointly by the **North Dakota Municipal Bond Bank** and the **Department of Health**. The Bond Bank is responsible for reviewing and assessing the financial capacity of borrowers in connection with loan applications, arranging financing for program activities and accounting for the loans, their repayments and investment of program funds. Meanwhile, the Department of Health is responsible for the ongoing operation of the programs, monitoring construction progress of wastewater treatment and drinking water facilities financed by the programs, and evaluating loan applications made by prospective borrowers for compliance with the program requirements. In a similar structure, the **Iowa Finance Authority** is responsible for the financial aspects of the states's DWSRF program while the **Iowa Department of Natural Resources** is responsible for the technical aspects.

Often, statutes may direct a particular requirement be satisfied for reasons independent of the CWSRF or DWSRF programs such a requirement might be incorporated into a monitoring system at little or no additional expense. A prime example is a state statute that requires public entities to perform annual audits. These audits may provide valuable financial and other information helpful in determining the credit-worthiness of a particular borrower.

In any case, the lending agency can take advantage of “outside the program” requirements to develop a more efficient, less costly monitoring system. This essentially equates to outsourcing certain monitoring responsibilities to other parties.

Outsourcing to Private Entities

Private entities may be able to perform monitoring tasks on an outsourced basis. This might represent a prudent step when funding sources are available but qualified personnel are not, or in situations where outsourcing the monitoring could generate significant administrative cost savings. This concept frequently applies to items such as construction inspections, audit preparations, arbitrage calculations, etc. where specific professional skills are necessary to perform the task. The program staff can merely verify that these tasks are performed, and then use the provided information to develop analysis and make informed program decisions. In the case of audit preparation, outsourcing makes sense, rather than sending staff members to thoroughly review the books of all of its borrowers. Likewise, in the case of construction inspections, requiring the borrower to hire an independent inspector makes more sense than having a staff engineer on every construction site for the duration of the project.

Section Three - Areas of Monitoring

There are four major functional areas of monitoring: **financial monitoring, construction monitoring, operational monitoring, and draw monitoring**; all four have similar themes of compliance with program requirements and legal requirements. Generally, monitoring requirements that place a burden on the program are either located in authorizing legislation and subsequent rules and regulations, or set forth in some form of policies and procedures manual. Monitoring requirements on the borrower should be set forth in some form of loan agreement. The next few sections address each area independently before presenting a discussion of the coordination of the different functional areas.

Financial Monitoring

The purpose of financial monitoring is to ensure compliance with the financial and legal covenants and requirements associated with individual loans, with the ultimate goal that each loan be properly repaid. Generally, financial and legal covenants and requirements are set forth in the loan agreement describing the terms and conditions of the loan. Other sources of requirements may be state statutes, rules and regulations, or Federal program requirements. Financial monitoring may be performed throughout the life of the borrower’s loan, and may begin as early as the time of loan application. The monitoring system should be designed to indicate when the borrower’s ability to repay the loan might, in any way, be adversely affected.

Borrowers pledge certain available revenues to loan repayment. Water and/or sewer system revenues are the most common, but a wide variety of revenue streams may be made available. Some other common examples are revenues from the sale of electricity or natural gas, solid waste disposal revenues, and proceeds from local sales, ad valorem, or other taxes. In certain cases, a borrower may make a general obligation pledge and/or rely on future state or federal

appropriations for repayment. The financial monitoring system should assess the present and future viability of those revenue sources, including direct analysis of financial statements as well as indirect analysis of other contributing economic factors.

Financial Monitoring Techniques

There are two general approaches to financial monitoring: **individual loan monitoring** and **portfolio monitoring**. Individual loan monitoring checks for each borrower's compliance with specific financial and legal requirements, whereas portfolio monitoring looks at a group of loans as a whole to monitor compliance or achievement of more general program objectives. The most effective monitoring systems find the right blend of both approaches, devoting resources to absolute individual requirements while maintaining portfolio requirements within acceptable margins.

Comprehensive financial monitoring can yield a tremendous amount of data that may or may not be useful. Identification of those sources of information that provide relevant data in an appropriate format will better allow for any necessary analysis by program staff. Distinguishing between "reactive" data and "proactive" data is another key to effective monitoring. **Reactive data** indicates that something has happened and some action is needed in order to remedy the situation. An example might be an indication of insufficient revenues to cover the next loan payment. Such an indication might allow only for a short, "reactionary" time period with few options. Conversely, **proactive data** allows trends to be identified in advance of a problem; often allowing enough time to formulate alternative solutions. Without monitoring proactive data, the foregoing example might result in a payment default, or perhaps the borrower might have to reduce other essential services in order to meet its payment obligations. However, if proactive data is effectively monitored, the borrower might have time to implement appropriate measures to avert drastic consequences.

It should be noted that any financial monitoring performed during the life of a loan should be an extension of the initial credit analysis performed prior to the loan. Often, the initial credit analysis may be the best indicator, going forward, of specific areas within individual loans that may warrant more intensive monitoring. The initial credit analysis also provides a critical "baseline" for evaluating the health of a loan. Monitoring the borrower carries this baseline forward by allowing the identification of historical trends directly or indirectly affecting the fiscal health of a borrower.¹⁰

The **Arizona Water Infrastructure Finance Authority** and the **South Carolina Budget and Control Board** are two state programs that utilize the technique of conducting a thorough initial credit profile, then using monitoring as an extension of that profile. South Carolina's annual review is an abbreviated version of the actual initial credit review performed prior to loan closing. Information about the borrower's rates and debt is updated as well as other financial information presented in the borrower's audited financial statements. Many of the same ratios utilized in the original credit review are analyzed to ensure compliance with the loan agreement requirements. If the borrower's financial condition deteriorates or there is a violation of the loan

¹⁰ See Chapter I, Financial Viability of Public Borrowers, for a more thorough treatment of the concept of credit analysis. The ratios and other criteria utilized for an initial credit analysis are often the same information monitored throughout the life of a loan.

agreement, the borrower is notified and must submit a corrective action plan. Similarly, Arizona utilizes an annual loan review checklist to monitor compliance with credit profile requirements.

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While there are unlimited potential sources of data, several sources are most commonly utilized. These common sources are **annual audits**, **periodic operating statements**, **bank or local trustee statements** and **on-site records reviews**.

Annual Audits

Annual audits are required of public entities in many states, independent of any CWSRF or DWSRF program requirements. Often this represents a valuable source of data at little or no additional burden to the borrower, provided the audit is received in a timely manner. There are several types of audits commonly performed in connection with CWSRF and DWSRF programs. The audited financial statements provide an end of the year snapshot of the financial viability of the borrower. As part of the audited financial statements, the borrower may be required to submit a management letter presenting a summary of management discussion and analysis of the audited year, including how the year progressed, a comparison to previous years, and a future outlook. A single audit may be required in certain cases, comprising a review of borrower compliance with applicable program requirements. This may be a particularly useful tool if the state program does not have adequate resources to closely monitor borrower compliance with program requirements. A particular type of single audit commonly required for some CWSRF and DWSRF borrowers is an **A-133 audit**.¹²

Based on information in the audit, program staff may conduct an annual borrower review by calculating key financial indicators to monitor a borrower for compliance with any program requirements.¹³ Annual audit requirements also provide an opportunity to encourage borrower compliance with generally accepted accounting principals. Following these standards improves the accuracy of information. Anything less is inappropriate for the administration of public monies.

Annual audits are typically performed by an independent entity such as a certified professional accountant, at the borrower's expense. However, in some instances, a state agency responsible for audit and inspection may perform annual audits of borrowers. Available program staff can also be utilized to conduct audits of program borrowers. A common covenant found in loan agreements is the availability of the borrowers books and records for review and inspection.

¹¹ See Appendix D for a sample template of the Arizona Water Infrastructure Finance Authority's "Annual Loan Review Checklist".

¹² United States Office of Management and Budget ("OMB") Circular A-133 *Audits of States, Local Governments, and Non-Profit Organizations*. If the borrower expends Federal funds in a total amount equal to or greater than \$300,000.00 in any fiscal year [of the borrower], then the borrower must complete an annual audit report in accordance with OMB Circular A-133.

¹³ For examples of annual borrower reviews, see Appendix E for the Annual Financial Review utilized by the Louisiana Department of Environmental Quality, and see Appendix F for the Current Indicator Update utilized by the Colorado Water Resources and Power Development Authority. For a more detailed discussion of the use of calculated financial indicators, see Chapter I, Financial Viability of Public Borrowers.

Annual audits provide both proactive and reactive monitoring of borrowers. Audits provide situational information that can allow a program and a borrower to react in an appropriate manner to improve or correct a particular financial situation. However, when analyzed in connection with prior years' audits, this information is helpful in determining long-term trends that may impact a borrower's ability to repay a loan, and may allow time to make appropriate modifications to any revenue streams securing the repayment. Annual audits are typically the most reliable data if they are produced and verified by an independent third party. Consequently, annual audits are most often the cornerstone of any individual loan monitoring system.

The **Maine Municipal Bond Bank** requires all borrowers to submit annual audits, single audits, and management letters. The audits are reviewed by staff to determine if any deterioration in financial status has occurred. The annual audited statements for borrowers in Maine's leveraged SRF program are also forwarded to the **rating agencies**. On the other hand, the **Massachusetts Water Pollution Abatement Trust** only requires audited financial statements from large borrowers in the leveraged pool or single borrowers outside the leveraged pool program. Those borrowers that are part of the loan pool program are not required to submit audited financial statements.

Operating Statements

A supplemental monitoring tool to annual audits is to require the submission of periodic operating statements. From the financial perspective, these operating statements provide short-term revenue reports useful in identifying long-term revenue trends. Examples of concern might be fluctuations in water or sewer usage, number of customers, loss of a large industrial customer or variations in other sources of pledged revenues. Periodic operating statements allow for more frequent monitoring of a borrower's ability to repay, which can be of particular importance if loan payments are made more frequently than once a year. Program staff can identify revenue trends on a monthly basis, and while taking into account the somewhat cyclical nature of revenues and expenses, can often identify borrowers in the early stages of financial hardship and assist in implementing corrective steps. The requirement of periodic operating statements places a burden on borrowers to produce prompt and accurate information and a burden on program staff to interpret the data. However, periodic operating statements are particularly useful pieces of information to supplement a borrower's annual audit.

The **South Carolina Budget and Control Board** requires certain program borrowers to submit unaudited financial statements quarterly or semi-annually if and when the borrower's credit quality is determined to be weak. Conversely, the **Oklahoma Water Resources Board** requires every program borrower to submit monthly operating statements.¹⁴

Another supplemental tool to the annual audit is the requirement that the borrower provide bank and/or local trustee statements relating to the loan proceeds or the revenues pledged to loan repayment. These bank statements are sometimes helpful in verifying the accuracy of periodic operating statements and, if applicable, verifying the proper expenditure of loan proceeds. The information relating to use of proceeds may be of particular importance if the loan was funded in

¹⁴ See Appendix G for the form of the Oklahoma Water Resources Board Monthly Operating Statements. These monthly operating statements comprise elements of financial and operational monitoring. See also *Operational Monitoring*, infra.

part from proceeds of tax-exempt program debt, for calculating any possible arbitrage rebate liability.¹⁵ This calculation may be performed by the lender or the borrower, but is often outsourced to an accounting firm or other organization with recognized ability for preparing accurate arbitrage calculations. The production of bank statements places only a limited burden on the borrower; but does place some burden on program staff to interpret the information. This form of monitoring (except for arbitrage calculation purposes) is most useful if there is difficulty in obtaining accurate information directly from the borrower.

Portfolio Monitoring

When setting program goals for individual and portfolio monitoring, the key question to ask is what must be monitored versus what should be monitored? Certainly, it is important that borrowers comply with every program requirement. However, it may not be prudent to allocate vast resources to the pursuit of less important components of the monitoring system. For instance, specific requirements of repayment must be met by every borrower to properly sustain the program. Therefore, it would be appropriate to allocate sufficient resources to ensure every payment is received, and to track down any delinquent payments. What the system of monitoring should allow the program staff to do is identify those loans that might have difficulty in making payments, and focus time and effort on those particular loans. This is where the concept of “portfolio” monitoring arises. Program staff would not have time to actually analyze information if they blindly tracked down every last monitoring requirement. Under portfolio monitoring, staff sets goals across an entire portfolio of loans, with missing requirements kept below a certain percentage of the total portfolio. The theory behind such a philosophy is that the benefit of expending extra effort to obtain the remaining outstanding information is greatly outweighed by the cost in human and capital resources in actually obtaining it. Those efforts of staff would be better spent analyzing the data that has actually been obtained. Based on the analysis, certain loans may be identified upon which greater scrutiny should be placed. Ultimately, there is no sense in monitoring for the sake of monitoring. Monitoring is only effective when the information is appropriately analyzed and acted upon. Portfolio monitoring may also be of particular interest to potential investors in program debt or to rating agencies, especially because of the loan pool nature of the leveraged programs. Investors and rating agencies may desire historical default rates and debt coverage calculations in determining an appropriate credit rating on the debt. Making the information available may lead to lowered costs of borrowing when the program can demonstrate the effectiveness of having a proactive financial monitoring plan in place.

Identification of risk factors that can be used to classify the degree of monitoring warranted for a particular borrower is an important aspect of the concept of **portfolio monitoring**. Prior to more detailed analysis, it may be appropriate to divide borrowers into two or more tiers representative of differing monitoring levels. This division can be based on several simple and easily identifiable borrower classifications. Table One presents several possible classifications. While certain individual classifications may not always be representative of a borrower’s actual fiscal responsibility, collectively they represent a starting point upon which more thorough analysis

¹⁵ Generally, arbitrage rebate liability arises when the proceeds of tax-exempt bonds are invested at a rate of return higher than the yield on the bonds. Failure to rebate any excess arbitrage earnings to the United States may lead to penalties including, in the worst case, the taxation of interest paid on the bonds. (See Chapter V for a more detailed explanation of arbitrage bond proceeds).

may be conducted. Individual programs might consider developing some form of matrix or scoring system utilizing identified risk factors to classify loans for monitoring purposes.

<u>Classification</u>	<u>Explanation</u>
Smaller, rural borrowers vs. Larger, urban borrowers	Larger borrowers may generally have greater economic ability to repay a loan, and may have more sophisticated economic and technical ability to operate and maintain complex water and wastewater infrastructure.
Limited borrowing history vs. Established bond ratings	Borrowers with established bond ratings have already been reviewed for purposes of establishing credit quality. Submitting all borrowers to rating agencies for rating or investment grade determination may be a requirement for recipients of leveraged program bond proceeds.
Presence or absence of Capital Investment Programs	Borrowers with sources of fund (dedicated sales tax, monthly capital improvement charge, etc.) dedicated to capital improvement or a program for maintaining a reserve for operation and maintenance expenses will generally be financially stronger.
Previous CWSRF or DWSRF borrowing experience	Prior direct lending history allows a program to determine the degree of monitoring that may be appropriate.
Loan payments pledged to bond issue repayment	Differing monitoring requirements may be imposed depending on whether the loan repayment is pledged as security for repayment of program bonds. ¹⁶

In an example of effective portfolio monitoring, some states prioritize monitoring resources based on financial analysis of borrowers’ annual audits. The **Virginia Resources Authority** developed a Compliance Monitoring System that systematically monitors the localities’ financial condition. Borrowers are divided into three groups, with the riskiest borrowers undergoing a financial analysis review every year. The least risky borrowers are subject to a financial analysis every three years, with the other borrowers reviewed every two years. Classifications are not static, and can change their financial review. Financial ratios for the borrower are compared to benchmark values in order to determine their financial status. If the borrower receives an unfavorable review, they are placed on a “**watch list**” with further review of their enterprise and general funds.

¹⁶ The Arizona Water Infrastructure Finance Authority categorizes all loans with in one of three classifications: Qualified Pledged includes loans pledged as direct security for the Authority’s bonds and having the highest characteristics with respect to financial and system capabilities; Qualified Not Pledged includes loans not pledged to the Authority’s bonds but having moderate characteristics with respect to financial and system capabilities; and Not Pledged includes loans not pledged to the Authority’s bonds and having the lowest characteristics with respect to financial and system capabilities.

Another example, utilizing a form of outsourcing, comes from the **Montana Department of Natural Resources and Conservation**. Borrowers from the Montana programs are required to submit their yearly budget, audit, and financial statements to another state agency for certification. The Montana programs then supplement this annual review by randomly reviewing the borrower's financial documents themselves.

On-site Reviews

For several reasons, on-site review of the borrower's books and records is a particularly cumbersome and resource intensive monitoring technique. First, on-site review requires significant time and expense of program staff, especially when the borrowers are remotely located. Second, such a presence may be deemed overly intrusive by the borrower, and actually lead to decreased cooperation of the borrower with any monitoring requirements. However, on-site monitoring may be appropriate in certain situations. If a particular borrower refuses to provide necessary project and financial information, sending staff out to obtain the information may in fact be the only viable recourse that does not involve litigation. While a persistently uncooperative borrower can be compelled by legal means to comply with terms of the loan agreement, if there are financial instabilities, potential legal recourse may not yield results soon enough to prevent a default.

Conversely, on-site monitoring may be appropriate after distressed financial circumstances are identified, as part of a continuing effort to assist the borrower in bringing their financial affairs under control. This proactive approach may be appropriate, especially when dealing with smaller or less sophisticated borrowers, lacking the necessary local resources needed to administer municipal utility systems.

Good working relationships are essential to the flow of accurate and timely information in the monitoring process and periodic "**customer calls**" may present a less cumbersome, more proactive approach to on-site review. These less formal on-site visits allow program staff to interact with the borrowers on a personal level, view operations and procedures, and develop business relationships. Announced customer calls can assist in building working relationships and provide an opportunity to address borrower questions and concerns.

Unannounced customer calls may be perceived as intrusive, and are only appropriate in situations involving an uncooperative borrower. Examples where an unannounced customer call might be necessary include situations involving rapid turnover in the local governing body, such as firings or resignations relating to internal power struggles, and in situations where the destruction of important records may be imminent. Conversely, announced customer calls allow for on-site review of books and records in a less threatening manner, and often facilitate cooperation by the borrower. The burden of periodic customer calls falls primarily on the program, and includes the time and expense of the associated travel. However, the benefits to be realized include the fostering of better working relationships and the progressive promotion of the programs.

Security Positions

Another useful technique is to maintain open communications with a borrower's other lenders. Many borrowers may have other indebtedness outstanding that may have equal (**parity**), higher (**prior** or **senior**), or lower (**subordinate** or **junior**) security positions with respect to the same revenue sources. Additionally, some projects may be co-funded from two or more financing sources at the federal, state, or local levels, as well as through private lending or debt-issuance. Other lenders may be able to provide indications of financial difficulty on the part of the borrower. It is also important to verify that the borrower is repaying its creditors in the proper order and not transferring repayment monies to lien creditors that have lower priority standing.

Multiple lenders often work out the major issues of security lien positions and monitoring responsibilities through a type of document generically called an "**Intercreditor Agreement**".¹⁷ These types of agreements are executed by two or more lenders to conclusively establish the order of priority each creditor's lien may represent, including to grant a parity lien position for a later loan as compared to an earlier loan that would otherwise have a prior senior lien position. The agreement also often recognizes that certain creditors may receive information relevant to the proper credit evaluation of a loan, and place an obligation on a lender to disclose that information to other creditors.

Lien position may be another factor that drives the extent of monitoring required on a particular borrower. If a lender finds its lien position subordinate to other outstanding debt, it may be worthwhile to more closely monitor that particular borrower, since in a case of default, the subordinate lien lender might actually recover nothing. It is therefore also important to monitor and maintain a lien position. The **Uniform Commercial Code (UCC) Article 9** is the widely adopted model law that governs the perfection of security interests.¹⁸ Article 9, in its model form, contains a provision that allows financing statements to be filed¹⁹ with the designation "**transmitting utility**"²⁰ in order to perfect a security interest in collateral pledged to the repayment of a loan without further continuation filings.²¹ However, the UCC has not been fully adopted in its model form in every state. Therefore, it behooves the lender to make sure that they are in proper compliance with any filing requirements of their respective state statutes with regards to financing or mortgage filings.

From a security standpoint, a lender wants the most senior lien position with respect to any real or personal property pledged to the repayment of, or as security for a loan. Generally, the "first in time, first in right" rule applies. In case of default, the first or senior lien holder gets first

¹⁷ Other common titles include "Parity Agreement", "Subordination Agreement", and other variations that may more appropriately describe the intent of the agreement between multiple lenders.

¹⁸ As proposed by the National Conference of Commissioners on Uniform State Laws and subsequently enacted by individual States. Each State may adopt the model Uniform Commercial Code in whole or in part, with additions, deletions, or modifications, and may or may not promptly adopt subsequent proposed revisions to the Code. Readers are advised to consult applicable state statutes to verify the applicable law. The Uniform Commercial Code generally does not address the perfection of security interests in real property (land) as might be covered under a mortgage.

¹⁹ Financing Statements are generally required in order for a lender to perfect a security interest in collateral pledged to the repayment of a loan, including for example system revenues, sales tax, or other pledged revenue.

²⁰ "Transmitting Utility" is generally defined to include the production, distribution, and collection of water and wastewater.

²¹ On most other financing statements filings, a continuation statement must be filed every five years, otherwise the original filing will lapse and the priority position will be lost.

priority to recover up to the full amount owed, then the second or subordinate lien holder gets to recover anything that may be left. As a practical matter, if a borrower defaults on a loan, chances are slim that they could actually repay all their outstanding debt. Therefore, a senior lien position is advantageous in that the senior loan will be repaid first, before any payments are made to a junior loan. If a loan is made from proceeds of a bond issue, a senior lien position may be desirable and in fact necessary to meet program bond covenants. An intercreditor agreement may be required to achieve a parity senior lien position equal to other previously outstanding debt of the borrower.

A senior lien position may be desirable if a borrower's credit quality is weak. If a borrower's credit quality is stronger, a junior or subordinate lien position may be acceptable. This subordinate lien position may also be necessary if the structure of the loan dictates that a parity position cannot be obtained because the loan does not conform to the more stringent covenants and requirements that need to be made in order to qualify for a parity position with the prior obligations. This can be a particularly important area to monitor because a borrower may have the opportunity to severely dilute a subordinate security interest by, at a later date, issuing additional debt on a parity with the prior obligations and senior to the program debt. If this is a concern on a particular loan, the loan agreement should contain a provision restricting the borrower's ability to issue senior lien debt. A monitoring system should then seek to verify that this provision is not violated by analysis of annual audits and other financial information. Absent such a restricting provision in the loan agreement, a lender should be particularly leery of the potential for interloping debt.

Realistically, a CWSRF or DWSRF lender probably has no desire to own and operate its own system, nor does it want to try to repossess a secondary clarifier or a sequencing batch reactor. In the case of a loan default, the lender could be faced with that very scenario, if not for one advantageous remedy employed in some states. Upon the occurrence of an event of default, the lender can appoint a receiver or temporary trustee to take over, operate, and maintain the system on a profitable basis and ensure the payment of the principal of and interest on any borrower indebtedness. This allows the system to continue providing water and sewer services to its customers, but protects the interest of lenders in the repayment of their loans. This can also allow time to either reorganize the borrower, or find another entity to purchase or take over and operate the system.

Revenue Trends

Other local economic indicators provide valuable insight into the long-term fiscal health of a borrower. The relevant key indicators are determined by the particular revenue pledge for each loan. If the pledged revenues are water and sewer use income, important factors to consider are the largest volume users, general per capita usage, and overall population. If the pledged revenue is sales tax income, appropriate indicators are largest taxpayers, per capita income, population, and the presence of large and diverse retail operations. Pledged ad valorem tax revenues could be tracked through assessed property values and the largest taxpayers, while pledged income tax revenues could be tracked through large employers, per capita income and unemployment rates. If future state appropriations are pledged, the program might monitor appropriate elements of state fiscal health.

This proactive system of monitoring allows the program to identify long-term revenue trends that, while equally important during the loan approval phase, warrant continued monitoring throughout the life of the loan. Economic circumstances can often change dramatically over the course of a twenty year or longer loan repayment period, and monitoring can allow for identification of alternative, more stable revenue sources, if needed. Additionally, background economic information may be required by any rating agencies providing ratings on program debt. Depending on how such a monitoring technique is implemented, the burden may be placed either on the borrower, the program, or both. Much of the information may be available through various internet resources; however, the borrower or other local entities (county clerk, city clerk, chamber of commerce) may be able to provide more up to date facts and figures.

Project Monitoring

The purpose of project monitoring is to ensure that the project complies with CWSRF or DWSRF program requirements. Project monitoring encompasses engineering and environmental design, including opportunities for public notice and comment, through construction and implementation of the project. Project monitoring allows for oversight of the proper use of CWSRF and DWSRF proceeds.

Project Monitoring Techniques

The first stages of any project monitoring system begin during the loan approval process. This includes review of the engineering and environmental design for conformity with program requirements, as well as monitoring compliance with other laws and regulations relating to competitive bidding, federal cross-cutting authorities and any other applicable federal, state and local laws. Once the project is underway, it is equally important that the project actually be completed according to approved plans and specifications. Perhaps the most effective way to monitor this goal is to conduct physical inspections of the project site.

There are two general types of inspection: the **daily inspection** of project conformity to plans and specifications, and the **periodic progress inspection**. Day to day inspections are particularly intensive and generally not practical for program staff because of the time and expense involved in maintaining a staff presence at every project site. However, many states' laws require independent inspection on public construction contracts, so therein is an opportunity to obtain project information for program use that is already being generated by another source.

The benefit of providing continuous monitoring of project progress is to ensure the proper expenditure of public monies and to eliminate the potential for waste. Inspection reports can be submitted to program staff at minimal additional expense, which allows program staff to make only periodic visits for monitoring overall compliance with program requirements. For planning projects, requiring periodic reports from the consulting engineer may be helpful in monitoring progress. Periodic staff visits can also be important in monitoring payment draw requests, and facilitating the expeditious completion of the project. The burden on the program is the time and expense for program staff to make actual site visits, and the necessity to maintain sufficient staff to be able to handle the workload.

Most states that elect to monitor construction do so with periodic visits supplemented with review of the daily inspection reports. The burden on the borrower is the cost of retaining an independent inspector, although this may in fact be required, as mentioned previously, by law. The **South Dakota Board of Water and Natural Resources** is one example of a state program that utilizes periodic construction inspection visits by staff in order to verify the quantities of work being claimed for reimbursement.

An alternative to making site visits would be to rely on the reports of an independent inspector, and perhaps achieve some visual confirmation of project progress through the use of photographs. With the advent of the digital age, this may be a feasible option using a digital camera to transmit photos electronically. However, just a review of paper and pictures may not be sufficient to verify the quality of work for the desired project objectives.

Another technique for project monitoring that can be performed independent of or supplemental to periodic visits, is to require certifications by the borrower, consulting engineer and contractor of each portion of a project; requiring all parties to waive any liens or encumbrances, and require that the borrower formally accept the project. This option, often used by commercial lenders, does not provide physical verification as to the quantity and quality of the project, but is an adequate intermediate monitoring technique for those programs that may not have sufficient resources to conduct even periodic site visits. This information is also helpful in coordinating draw requests for payments.²²

Operational Monitoring

The purpose of operational monitoring is to ensure that the projects completed using CWSRF and DWSRF monies are properly used and maintained. This is important for two reasons: first, to determine if the environmental objectives of the project are being attained; and second, to ensure the proper maintenance of what may be the primary asset securing repayment on the loan. If a system is not operated properly, or is in disrepair, a borrower may be unable to generate sufficient revenues to repay their obligation, or conversely, may eventually incur huge repair and replacement costs that could compete for system revenues.

Operational Monitoring Techniques

One useful technique for operational monitoring can be performed in coordination with financial monitoring through the requirement of **periodic operating statements**. Information provided in these operating statements can provide valuable data towards determining the long-term viability of the borrower's project. Reports can show if the system is operating within its performance specifications, and when and if appropriate periodic maintenance is being performed. The reports may also provide evidence if a borrower is utilizing the project for any private activity that may be in violation of the loan requirements. As in financial monitoring, the burden for providing this information is placed on the borrower, thus the information may be limited in value by its accuracy or timeliness.

²² See *Draw Monitoring*, infra.

Verifying proper **certification of system operators** is another useful technique. Improperly trained personnel operating water and wastewater systems may not only damage the systems themselves, but may also cause potential danger to life, health, and property. Many states require system operators to maintain certain certifications or licenses, and many also require systems to meet certain performance criteria related to water quality or effluent quality. Systems that are out of compliance may be forced to cease operation or pay substantial fines, and the lost revenues may adversely affect a borrower's ability to repay its loan.

On-site visits may be an effective part of an operational monitoring plan. On-site visits yield first-hand information relating to the proper use and maintenance of the borrower's system that may not be disclosed in an operating statement. Often, these site visits can be coordinated with financial "customer calls" to cut down on the expense to the program. Another source of on-site visit information may be any system monitoring performed in connection with any environmental regulatory requirements. This might be another example of monitoring already being performed that the CWSRF or DWSRF programs can utilize with little or no burden to the program.

A more proactive approach to operational monitoring is to develop a **loan asset inspection program**. A loan asset inspection program may consist of on-site inspections and record-keeping relating to the condition of the assets that represent the security for repayment of the loan. These assets entail the water and wastewater infrastructure that may either be mortgaged to the program or at least represent the underlying assets upon which water and sewer revenues are generated in order to repay the loan. Such a program provides valuable planning information from two perspectives. First, the information can be provided to the borrower for capital improvement expenditure planning, as well as planning for periodic maintenance and upkeep. Second, the data provides a valuable planning tool for the program to meet long-term, identifiable water and wastewater funding needs, as systems wear out and ultimately need to be upgraded and/or replaced. The information generated can be useful in developing comprehensive, integrated priority lists for both CWSRF and DWSRF programs that more accurately reflect the true water and wastewater infrastructure funding needs.

An extension of a loan asset inspection program might be to develop actual valuations of the securing assets. Such information might be useful to potential program investors looking for assurance that in cases of loan default, a sufficient value of assets exist that could be sold to cover the borrower's outstanding obligation to the program. This information may become available as local borrowers come into compliance with **GASB-34** requirements.²³

²³ Governmental Accounting Standards Series No. 171-A, June 1999, *Statement No. 34 of the Governmental Accounting Standards Board – Basic Financial Statements and Management's Discussion and Analysis for State and Local Governments*. ("GASB - 34") Infrastructure assets that are part of a network are not required to be depreciated as long as two requirements are met. First, the government manages the eligible infrastructure assets using an asset management system. Second, the government documents that the eligible infrastructure assets are being preserved at or above a condition level established and disclosed by the government. The asset management system should have an up-to-date inventory of eligible infrastructure assets, perform condition assessments of the eligible infrastructure assets and summarize the results using a measurement scale, and estimate the annual amount to maintain and preserve the eligible infrastructure assets at the established condition level. See *Id.* at page 12. The information generated from meeting GASB - 34 requirements may help establish the parameters for an effective loan asset inspection or valuation program; likewise, a loan asset inspection program may greatly assist a local governmental entity in meeting GASB - 34 requirements.

Many state SRF programs do not have sufficient personnel to properly conduct loan asset inspections, however an alternative is to outsource to either another state agency or to a private engineering firm. The **Oklahoma Water Resources Board** outsources to a professional engineering firm that provides inspection reports and photographs on individual systems in electronic format, including GIS coordinate information that can be linked into a database.

Another program developed by the Oklahoma Water Resources Board independent of the CWSRF or DWSRF, is the **Oklahoma Beneficial Use Monitoring Plan** (“BUMP”). The goal of the BUMP monitoring program is to document beneficial use impairments, identify impairment sources (if possible), detect water quality trends, provide needed information on Oklahoma Water Quality Standards, and facilitate the prioritization of pollution control activities.²⁴ The Oklahoma CWSRF Program outsourced to the Oklahoma BUMP Program to monitor the environmental and water quality improvements associated with CWSRF funded projects, in order to obtain quantifiable data demonstrating actual positive environmental impact through the CWSRF.

Draw Monitoring

The purpose of draw monitoring is to match disbursements to construction completions and to generally monitor the flow of CWSRF and DWSRF funds. Draw monitoring often is done in coordination with project monitoring to ensure that only work performed is actually paid for. Such a system can assist in the expeditious use of program funds while helping prevent the unauthorized use of funds. Additionally, monitoring the general cash flow of program funds can provide valuable data upon which to base investment decisions as well as planning for future funding capacity needs.

Draw Monitoring Techniques

Draw monitoring represents the link between project monitoring and financial monitoring. Draw monitoring utilizes many of the same tools as other monitoring areas, including site visits, independent inspection of construction completions and verification of expenditures through review of financial documentation such as payment records and bank statements. A vast majority of states employ a drawdown method of project funding. With this method, a borrower is required to present the program with certified evidence of expenditures with supporting documentation such as invoices. The program staff then compares the information against the approved plans and specifications before any funds are released. The **Illinois Environmental Protection Agency**, like many state programs, requires signoffs by the borrower, consulting engineer and contractor on all invoices as proof that the work and payments are progressing properly, and then requires lien waivers by all contractors prior to processing final payments. Essentially, the borrower has a “line of credit” with the program, rather than a cash account from which to spend. This line of credit can be used to pay invoices directly or to reimburse the borrower for costs incurred.

²⁴ Oklahoma Water Resources Board Water Quality Division *Oklahoma’s Beneficial Use Monitoring Plan 2000 Draft Final Report*.

An alternative to reimbursement of expenses as incurred is to withhold reimbursement of the full project costs until completion. This may be an option for some large borrowers, but many smaller borrowers may be unable to pay all costs upfront. Another alternative that is sometimes employed is to fully fund the project. This alternative often makes use of a local trustee bank to administer the monies prior to expenditure, especially in cases where the loan is funded from proceeds of program indebtedness. In either case, draws may be monitored by the program staff, or even outsourced to the trustee bank, in order to assure the proper expenditure of program funds towards successful completion of the project.

The primary danger associated with not monitoring incremental draws is the use of funds for ineligible or unapproved expenses, with the potential consequence that the borrower will not have sufficient monies to complete the project, and thus be unable to begin operation and generate the revenues necessary to repay the loan. Additional consequences to the program may occur if the loan is funded from bond proceeds. For example if the monies are inappropriately invested and result in excess arbitrage earnings, or if the loan proceeds are inappropriately transferred to the benefit of private entities. Such consequences may include the loss of tax-exempt status on the program bonds, and ultimately, higher costs of borrowing for program participants.

Coordination of Monitoring Areas

Monitoring all areas of a program does not necessarily guarantee an effective monitoring plan. The crucial element of an effective monitoring plan is to coordinate between functional areas so that data is presented and maintained in a useful format and duplication of efforts is avoided. To this end, many states have begun to develop and implement **project management databases**, especially in light of the large amount of data a monitoring program may generate. These databases vary in design and function and may be tailored to the program design of each particular state, but have several common characteristics that make them particularly useful tools for coordinating projects. Properly designed databases improve information sharing and accessibility among program staff and eliminate redundant data entry. They also provide a single location for tracking project management that can easily be accessed across functional areas. More importantly, a properly maintained database allows program staff to spend more time on data analysis and less time on data retrieval and formatting.

Database applications can also be utilized to generate reports and summaries that are useful not only for staff, but may also be helpful to borrowers or the interested public. A web-based database may allow for remote, real-time data access and processing, that can be particularly helpful for field employees conducting on-site monitoring. Further, such web-based applications may also allow for more efficient submission of monitored information by the borrowers, including pre-programmed e-mail reminders when certain requirements are due. States have taken varying approaches to developing project management databases, from developing in-house to outsourcing the design to a software company. However, most states find that a database works better when tailored to the state program's specific design and monitoring criteria, as compared to a one-size fits all database.

The **Washington State Public Works Board** developed a custom Delphi database for its SRF programs by outsourcing to another state entity that was part of the Washington Community

College system.²⁵ The **State of Nevada**, through a grant from the U. S. Environmental Protection Agency, had a custom Access database developed through a private consultant for its CWSRF program.²⁶ The **Florida Department of Environmental Protection** took a different approach by having internal staff develop a custom Access database for its DWSRF program.²⁷ The **Ohio Water Development Authority** partnered with a private consultant to develop a state loan tracking system for its own use and to market to other states.²⁸

Another effective coordination tool is to develop **project teams** within the program staff. Often, functional units are separated out according to their financial or technical expertise, and there may be only limited communication and coordination between the functional units resulting in unnecessary delays in project administration. Project teams might, for example, each consist of a financial analyst, an engineer and an environmental specialist. Each team would be responsible for all aspects of the project from the time the project is placed on the priority list to the time the loan is fully repaid. While the benefits of a team approach clearly extend to many other aspects of program management, the teams are of particular use in allowing close coordination of monitoring efforts, especially in areas where those efforts will inherently overlap. Primary examples of this are periodic operating statements which provide valuable financial and operational information, and on-site “customer calls” that can accomplish a myriad of monitoring goals in addition to development of potential future business. The **Oklahoma Water Resources Board** has taken steps towards implementing a team-based loan approach in order to facilitate and expedite the loan application and monitoring processes.

Another important aspect of coordinating monitoring is the reality of employee turnover and the resulting need for succession planning. State agencies often find difficulty in maintaining employee continuity when faced with competing private sector opportunities and limited budgetary resources. Developing and following sound policies and procedures for program operations, coupled with accurate and timely record keeping, can greatly assist a state program in assuring a smooth transition among staff. Databases are an excellent tool, if appropriately designed and maintained, to allow newer staff to access important loan information quickly and overcome what can be steep learning curves. Teams can be an even greater asset. In a team setting, the other team members may be able to bring a new staff member along quicker on a new project than if the new staff member had to learn the project on their own.

Section Four - Summary

When developing the monitoring plan, the key points to always keep in mind are:

- What does the program need to monitor, i. e. what are the necessary or desirable pieces of information that will allow the program to operate successfully, meet any legal obligations, and minimize the chances of a loan defaulting?

²⁵ State Revolving Fund Program Management Workshop materials, October 9-11, 2001, Kansas City, KS.

²⁶ State Revolving Fund Program Management Workshop materials, October 9-11, 2001, Kansas City, KS.

²⁷ State Revolving Fund Program Management Workshop materials, October 9-11, 2001, Kansas City, KS.

²⁸ Based on distributed promotional materials.

- What is the optimal allocation of available resources to meet the necessary requirements for monitoring?
- What resources are available for monitoring, including staff, funding, and technical resources, within the program? If staff is limited, is outsourcing data collection and analysis an option?
- Are there other potential sources of useful information already being generated for other purposes?

Every program will have to develop their own answers to these questions, and find a way to successfully balance the burdens monitoring places on the program and the borrowers with the benefits that may be attained. However, the old axiom holds true: An ounce of prevention is worth a pound of cure. It will forever be more valuable to identify factors today that may cause problems tomorrow, than to identify factors tomorrow that caused problems today.