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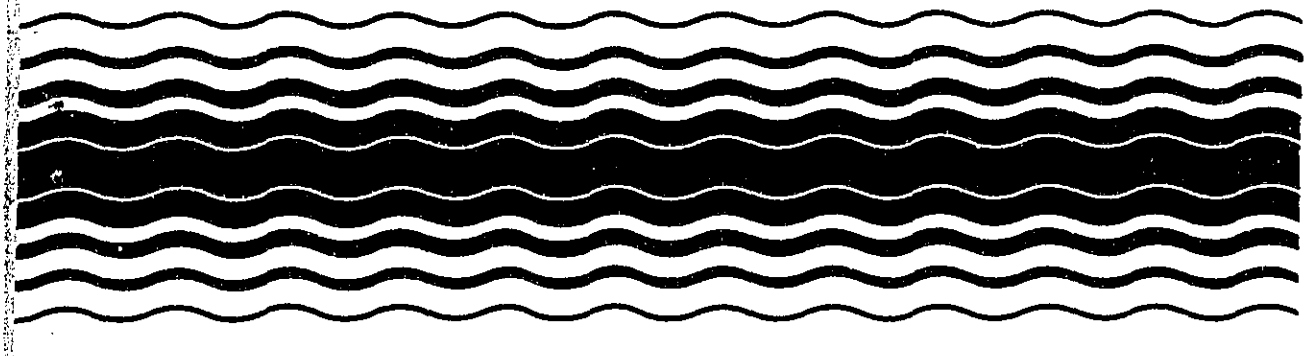
EPA

Noise

Analysis of EPA Technical Assistance to State and Local Governments

Volume VI: Summary



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Analysis of EPA Technical Assistance to State and Local Governments

Volume VI: Summary

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SECTION 1

BACKGROUND

1.1 VIEWS OF TECHNICAL ASSISTANCE IN EPA

This report is the concluding report in a series of companion studies examining technical assistance efforts in five EPA program areas -- air, wastewater treatment, drinking water, solid waste, and noise. The project was originally mandated by the Office of Management and Budget, which requested a general examination to improve the Agency's understanding of this important but amorphous subject. The study is under the direction of the Program Evaluation Division of the Office of Planning and Management.

Because EPA is first and foremost a regulatory agency, it has tended to regard technical assistance as something of a stepchild. Over-simplified, the orthodox view is that enforcement is the most appropriate incentive to improve program performance -- to some, the only legitimate one. Where it exists, both inside and outside the Agency, this view is strongly held, and not without good reason: the ability to regulate environmental pollution and enforce against offenders is the essential element of the modern environmental movement, and EPA is its chief proponent. By comparison, "technical assistance" is often considered a passive means for achieving program compliance. As a means of achieving program goals, it is suspected of being outside EPA's proper mode of operation, or at least not as cost-effective as enforcement. As a result, technical assistance efforts have often been submerged within programs. Important exceptions exist, such as in the solid waste and drinking water programs, but they are just that: exceptions.

While the need for such things as training, technical guidance, and administrative assistance is acknowledged even by those who take the hardest line, it is assumed that grants and other financial assistance satisfy the Agency's responsibilities in this regard, and that compliance with program requirements can thereafter be compelled through legal, administrative, or financial sanctions. Rigorous policing of programs is often assumed to lead to new markets for technical assistance outside of EPA, either in the public, semi-public, or private sectors. To an extent, this is true, and this study has taken as its main theme the discovery of new mechanisms to leverage technical support for EPA programs from outside the Agency. But to the extent that TA and enforcement are viewed as direct tradeoffs, programs suffer.

Technical assistance is an alternative to enforcement in some situations, for the carrot is often more effective than the stick. For instance, to improve performance of sewage treatment plants some States have hired "circuit riders" to make routine visits to plants with operating problems. For plants with only

occasional operational problems, technical assistance is often a more cost-effective method of achieving compliance than complicated enforcement approaches. In short, there are many instances in which TA serves multiple purposes, and it has some irreducible functions for which enforcement and money cannot substitute.

One of the most important reasons for technical assistance is that EPA programs are new, and must to a certain extent be considered still experimental. They often deal with completely new areas of regulation (e.g., hazardous waste) or deal with complex, novel and cross-cutting issues (e.g., the air and water programs). For the most part, it is virtually impossible for the private market or other sectors of government to respond in a timely way to the technical support needs of State and local programs. Furthermore, the extent of the market for this type of assistance is often small: whereas the engineering support for POTWs can draw off the experience of the established engineering profession, which has an extensive academic and professional infrastructure, engineering support for PSD permitting in the air program cannot easily piggyback on existing professional expertise. Not only is the mix of skills required new and evolving, but the total number of permittees is evidently not high enough to support widespread professional development. In such areas EPA is virtually the only reasonable source of technical support.

Another general area of concern regarding EPA's technical assistance obligations concerns the working relationships it hopes to establish or maintain. Although the delegation of certain programs carries with it certain obvious benefits for States (federal money, local control), for the most part these delegations are discretionary, and may revert back to EPA in the event of substandard program performance. To an extent, then, State and local governments are operating as adjunct staff to the federal government, and the use of sanctions (financial, administrative, even legal) becomes intrinsically undesirable.

1.2 HISTORY OF THE PROJECT

The Program Evaluation Division (PED) originally set out five program areas for examination. They were air, publicly-owned treatment works (POTWs) operations, drinking water, solid waste, and noise. PED originally developed and experimented with, under separate contract, a large scale telephone survey that would determine technical assistance needs across these five program areas. The results of this survey were to be used by USR&E in State and local field visits to explore needs in greater depth.

It quickly became evident that the initial telephone survey project was too ambitious to be performed within the project schedule. It was decided to reverse the order, substituting field visits for the telephone survey to serve the general needs of an assessment function. The field visits were also used to examine successful models of technical assistance outside of EPA. While the results that could evolve from a limited number of cases could not approach the statistical level of significance that a larger survey could, other benefits existed: in particular, USR&E field staff could dig deeper into the many potential needs of State and local programs, especially after prior consultation with EPA's program offices to determine the most likely issues of interest.

Following the initial round of field visits, which were performed in the summer of 1979, detailed write-ups and summary memoranda were prepared. These covered all the technical assistance topics that surfaced in the field interviews, and were circulated both within PED and to the program offices. USR&E and PED prepared recommendations for further analysis, and the program offices were invited to choose among these to reflect their own priorities. Once the program offices had indicated the direction in which they wanted further research to go, USR&E undertook the following:

1) Developed survey instruments to test possible new TA initiatives. Reflecting the program priorities of the EPA offices, USR&E compared the results of the field work (showing State and local TA needs and preferences) with major program objectives for the next several years. Survey instruments and a sampling plan were prepared for each of the five areas of concern, and interviews were scheduled with appropriate parties to refine and analyze possible improvements to EPA technical assistance efforts. Two considerations guided the preparation of these survey instruments (OMB#: 158-S-79009):

   - They emphasized TA delivery outside of EPA. Given the likelihood of increasing budget constraints on EPA's technical assistance resources, we wanted to maximize the participation of the private sector, other forms of government, and semi-public institutions (non-profit, professional associations, etc.).

   - They maximized opportunities to make cross-program evaluations. Every effort was made to make use of the then-existing understanding of the lessons each program could offer to others, and to prepare the ground for more systematic comparision of TA themes across programs after the interviews were complete.

2) Conducted in-depth interviews with appropriate parties. For each of the five program areas, between 50 and 100 separate telephone interviews were conducted with relevant TA recipients, providers, or outside observers. These included EPA regional personnel, State and local officials, consultants, non-profit groups, and others as necessary. Results were tabulated and compared where necessary, but some of the information solicited was analyzed qualitatively only.

1.3 SUMMARY AND SCOPE OF PROJECT REPORTS

Given the diverse and changing technical assistance activities in each of the EPA program areas, the study team spent a considerable amount of time meeting with individual program staff to determine which technical assistance programs would be the most profitable to explore. As listed above, the primary criteria in selecting technical assistance activities to study were the

following: there were opportunities for technical assistance delivery outside of EPA; and there was a potential to use the TA model in other EPA programs. In general, these criteria were applied. In the Air Program, EPA program staff felt that a needs survey for the short courses offered at EPA's Air Pollution Training Institute was the most appropriate contribution of our technical assistance study. Listed below are the reports that have been produced in the project:

Volume I: Air Program Training Needs

This report presents the results of a survey designed to assess States' needs for the short courses produced by EPA's Air Pollution Training Institute. Over the past ten years these courses have been the main source of training for State and local air pollution regulatory personnel. Recently, however, the budget for these courses has been reduced and both the number and variety of course offerings have been declining. The Office of Management and Budget has determined that these courses are not important: States could and should be getting this training from universities or consultants. States claim the courses are crucial to the quality of their programs. They cannot afford to hire or retain well educated, experienced staff, and these courses are the only practical way to train new personnel.

Heretofore these arguments have rested on anecdotal evidence. The training needs of State air pollution control agencies have never been documented. We decided therefore to survey administrators of State air pollution control agencies and the heads of the monitoring, enforcement/permitting and State Implementation Planning (SIP) sections to characterize the:

- Education and experience of entry level staff;
- Staff turnover rates and reasons for that turnover;
- Use, advantages and disadvantages of Air Pollution Training Institute courses; and
- Use, availability, advantages and disadvantages of alternative training mechanisms.

Volume II: An Initial Assessment of the National Rural Water Association

This report presents a description and assessment of Rural Water Associations (RWAs). Each RWA is a non-profit statewide corporation funded by EPA through the National Rural Water Association (NRWA), providing technical assistance and training to rural water systems for compliance with the Safe Drinking Water Act (PL 93-523). There are presently RWAs in 26 states. Technical assistance activities of the RWA include workshops, on-site troubleshooting, newsletters, printed materials, and peer match.

The National Rural Water Association technical assistance program was selected for study primarily because it represents a major EPA attempt to ensure compliance by rural water supply systems with the Safe Drinking Water Act (SWDA). The NRWA has been funded by EPA since 1977. Early discussions

in the study with the staff in the Office of Drinking Water revealed significant concern about the ability of rural water supply systems (particularly those serving fewer than 2500 persons) to meet the requirements of the SDWA. Because of the vast number of rural water systems -- over 50,000 systems serving populations less than 2500 -- rural water system compliance is indeed a significant issue for the Office of Drinking Water. This report is the first analysis of the NRWA/RWA network and their activities in providing technical assistance to rural water systems.

Volume III: Alternative Models for Providing O&M Technical Assistance to Publicly Owned Treatment Works

This report presents alternative models for providing operation and maintenance (O&M) technical assistance to publicly owned treatment works (POTWs). Several studies funded by EPA and the GAO have pointed to inadequate operation and maintenance of existing POTWs as a major reason for noncompliance with NPDES permit provisions. While there has been a decline in direct EPA resources to provide technical assistance to POTWs for O&M problems, EPA provides several initiatives to ensure O&M compliance, including annual program grants to the State water pollution control agencies that fund compliance inspections and technical assistance activities; enforcement; O&M requirements tied to the Construction Grants program, namely the Plan of Operations, the O&M Manual, and start-up grants; and training grants to states and private schools. Despite these efforts, O&M problems persist.

This report examines alternative models for providing O&M technical assistance to POTWs. Technical assistance, particularly on-site technical assistance, has been identified by EPA as a critical ingredient in dealing with O&M problems. Three technical assistance provider models are examined: the private sector; the State; and a POTW operator's association.

Volume IV: An Assessment of the Use of the Technical Assistance Panels Program in Local Hazardous Waste Management

This report examines the potential application of the EPA Technical Assistance Panels Program to local hazardous waste management issues. The Panels Program, begun in 1978 and administred primarily out of the EPA regional offices, provides assistance in one of three forms: EPA staff; consultant services; and peer match from a community. For a number of reasons, the Panels Program has primarily focused on conventional solid waste issues, particularly resource recovery and conservation matters. To some extent, this has been a deliberate strategy on the part of EPA because of its desire to encourage large-scale, high technology resource recovery facilities. Furthermore, responsibility in hazardous waste management, particularly at the local level, has been in a developmental stage. Regulatory responsibility and State roles are just now being promulgated. The hazardous waste program is simply not fully in place. In short, opportunities for Panels Program assistance in hazardous waste management have not yet been well-defined.

As the Agency's hazardous waste program begins to be institutionalized, opportunities for Panels Program assistance will become more apparent. This

report examines one specific potential Panels Program opportunity in hazardous waste management, namely the use of the program to develop a local hazardous waste screening procedure and local hazardous waste contingency plans.

An additional issue examined in an exploratory fashion in this project is the hazardous waste training needs of State solid waste agencies. Because of the expected large role most states will have in hazardous waste management, this topic appeared to be a useful topic to explore.

Volume V: An Initial Assessment of the ECHO Noise Technical Assistance Program

This report presents a description and an initial assessment of the ECHO (Each Community Helping Others) noise technical assistance program. ECHO, begun in January, 1978, is based on a peer match concept. It is funded by the Office of Noise Abatement and Control (ONAC), managed by EPA Regional Noise Officers, and coordinated by a public interest group, the National League of Cities.

The ECHO program was selected for study in the Noise Program for a number of reasons. First of all, it is one of the first formal technical assistance activities directed at local communities by ONAC. The Quiet Communities Program (QCP), an intensive demonstration of noise assessment and noise program implementation, was begun in 1977 but it is largely limited to a few demonstration communities. Both ECHO and QCP represent formal recognition on the part of EPA that noise abatement will primarily occur because of local efforts -- not just Federal and State regulations. Prior to ECHO and QCP, EPA's noise abatement approach was based on product regulation activities authorized by the 1972 Noise Control Act (PL 92-574). Since the passage of this Act, EPA has been in the process of setting noise emission standards on a number of major new products, such as motorcycles, construction equipment, and electrical equipment. EPA recognized, however, that Federal standard-setting activity will not abate noise without supplementary State and community noise control programs. ECHO is one of the EPA programs to stimulate the development of local noise programs.

Many of the grants allocated under the Quiet Communities Act have been awarded to States to develop ECHO-like programs at the State level. Thus, a second reason for studying ECHO was to learn lessons from the program before its concept was formally wholesaled to all of the States.

Finally, a central theme throughout our overall study of EPA's technical assistance efforts has been an examination of programs that emphasize technical assistance delivery outside of EPA. ECHO, while managed by EPA, depends on very little EPA funding support. One of the basic premises of the ECHO peer match concept is the development of a network of local noise experts. One of the goals of ECHO is to develop a continuously expanding network of technical assistance providers. This concept is in the mainstream of EPA's current thinking on alternative technical assistance providers.

1.4 SCOPE OF THIS REPORT

In the course of developing the reports listed above, the study team has examined a number of alternative technical assistance models. While many of these models have been developed for program specific needs, such as assisting small drinking water systems to comply with the Safe Drinking Water Act, it is our belief that some of these models have potential cross program application. This report discusses some of the models that appear to be particularly well-suited in providing technical assistance in several EPA program areas. In addition to describing these models, we discuss considerations that should serve as initial guidance to a program area before implementing any of the models.

SECTION 2

ALTERNATIVE PUBLIC SECTOR MODELS

2.1 INTRODUCTION

Technical assistance strategies abound in EPA. Across the five program areas, there has not been a lack of approaches and mechanisms for meeting technical assistance needs. The temptation is to criticize the agency for being unable to develop consistent and stable programs. In fact, the diversity of technical assistance approaches, and even their transformation over time, is not necessarily a problem. Two basic findings are clear from our research:

- there are significant differences in technical assistance needs within programs and across programs;
- some potential assistance needs remain constant, while others change over time.

The diversity of technical assistance approaches reflects the difference in needs. Technical assistance needs in EPA programs can be classified in a number of ways. Some of the useful classifications include:

- Type of Recipient--State vs. Local

  e.g. State Drinking Water Agency vs. local water supply system operator

- Responsiveness Required--Quick vs. When Available

  e.g. Hazardous waste spill vs. hazardous waste contingency plan

- Frequency--Ad Hoc vs. Recurring

  e.g. Air episode emergency response vs. training of air program source inspectors

- Complexity--Basic vs. Sophisticated

  e.g. Air program permit procedures vs. PSD modeling

- Demand--(a) Emerging vs. Declining;
  (b) Small vs. Large

  e.g. (a) Management of inactive hazardous waste sites vs. drinking water chlorination technology transfer

  (b) Air program enforcement procedure vs. wastewater treatment plant sludge handling

This classification of technical assistance needs explains, in part, the number of EPA technical assistance strategies. It also demonstrates the difficulty in fashioning long-term technical assistance strategies in the agency. There are obviously a number of needs and combinations--the sheer number complicates the development of effective technical assistance strategies. Equally constraining EPA in developing responsive strategies is the change over time in needs. There is a constant demand each year in the agency to spend more resources on technical assistance. There is rarely a request by recipients to reduce technical assistance. Thus, the agency constantly confronts the problem of programs that become institutionalized and difficult to cut. Reductions in technical assistance programs may also, of course, be complicated by the political power of a program's constituency that has been created over the years by the program. In short, the agency has to be constantly on guard on the institutionalization problem since there are demands for technical assistance in new emerging areas every year.

In response to diverse and changing needs, EPA's technical assistance efforts have run the gamut from on-site emergency response teams to deal with environmental emergencies to manuals that instruct an operator how to digest sludge. In between these ad hoc and programmed extremes are delivery mechanisms such as hotlines, workshops, and training courses. The agency has often provided the assistance itself, as in the case of the Air Program Training Institute at Research Triangle Park, North Carolina. This is particularly the case when needs are at the State level. More often, however, EPA is on the lookout for approaches to assist the States and localities that do not require significant EPA staff resources. The concept of using alternative providers to supply technical assistance to its primary constituencies--States and local governments--is a wise one since it allows the agency flexibility in altering technical assistance programs. In an attempt to further this agency objective, a number of alternative provider approaches are presented in this section. The models all have one thing in common--they rely on a provider outside of the agency. Beyond this similarity, however, the models have some important differences, particularly in the types of needs they can effectively address.

Based on our examination of different technical assistance mechanisms in the agency, we have selected several promising approaches that EPA program offices could consider for providing technical assistance. The following approaches are discussed:

- Demand-Response Model
- Circuit Rider
- Peer Match
- Standing Peer Group

For each of the approaches the basic concept is briefly outlined; examples are provided; issues associated with the approach are discussed; and the application of the approach to technical assistance needs in various program areas is presented.

2.2 DEMAND-RESPONSE MODEL

Concept

The demand-response model is an approach for dealing with ad hoc technical assistance requests. In this model, the provider essentially has the capability to provide routine, non-emergency type of technical assistance. It is based on the principle that there should be a readily available mechanism for responding to small problems before they become major emergency problems. Responses can include both on-site types or off-site (telephone or written communications) ones. Obviously, on-site responses are more expensive and resource-intensive than a telephone response mechanism.

Example: The Oregon O&M Technical Assistance Program

The example that we would like to highlight involves the Oregon O&M (operation and maintenance) hotline for municipal wastewater treatment plants. Technical assistance is a key element of the Oregon Water Quality Division O&M program. Technical assistance in the Oregon program may be triggered by any of the following:

- Operator phone calls to Headquarters or regional offices;
- Follow-up to State O&M inspections by regional offices;
- Follow-up to State reviews of monthly treatment plant monitoring reports.

According to Oregon's O&M specialist, almost 50 percent of all technical assistance efforts are triggered by operator requests. This reflects the tremendous rapport between the State and the operators. Two O&M specialists in Portland deal with these requests. Response by headquarters may take several forms:

- Answers are provided over the phone by Headquarters;
- Headquarters will schedule a visit to the plant;
- Headquarters will act as a clearinghouse and parcel out responsibility for providing technical assistance to one of the following:
  --regional O&M staff
  --plant's private consultant

The direct staff of the Water Quality Division assigned to O&M tasks consists of 8 people in headquarters and approximately 18 people in regional offices who contribute 21 person years of effort towards inspection, reviews, technical assistance and monitoring. Oregon has 312 waste treatment plants: 247 POTWs and 65 privately owned plants. With 21 person years of effort, Oregon has a ratio of 1:15, O&M personnel to treatment plants. When only POTWs are considered, the ratio drops to 1:11.

In fiscal year 1978, the Oregon Water Quality Division had an annual budget of $2,635,000 to cover 95 full-time equivalent positions. The State person year equivalents in the O&M division, Oregon spent $582,473 for a compre-
man year equivalents in the O&M division, Oregon spent $582,473 for a comprehensive technical assistance program that includes very frequent inspections, reviews, technical assistance and monitoring. Since Oregon has 312 sewage treatment plants, the State spent $1,866.90 per plant in 1978. If it is assumed that most of the assistance went to the 247 POTWs the cost per plant increases to $2,358.00.

According to EPA compliance figures, Oregon generally has a compliance rate of 75-80 percent for its POTWs based on standards for Biochemical Oxygen Demand (BOD) and Total Suspended Standards (TSS). This is one of the best compliance records in the country.

Transferability Issues

There are several aspects of the Oregon program that enable it to be successful. These ingredients affect the transferability of the Oregon approach to other States.

- Enforcement vs. Technical Assistance

The Oregon Water Quality Division has deliberately opted for a strong technical assistance approach as a means for achieving a high compliance rate among its POTWs. This does not imply that enforcement is totally missing in the program; rather, technical assistance is the first line of defense, while enforcement is generally used as last resort. The success of the technical assistance approach is, in part, attributable to a strong enforcement stance that is used when needed. In essence, enforcement as a backstop is critical to Oregon's responsive technical assistance approach.

- Technical Assistance Demand

Oregon's program is able to be responsive because its target audience is relatively limited--only about 247 POTWs. This relatively small number of POTWs allows the Water Quality Division to be both responsive and to provide good coverage. On the average, each POTW over 1 MGD in Oregon receives 8 visits (programmed and requested) from the State each year. Plants under 1 MGD receive about 5 visits per year from the State personnel.

- Multiple Response

The "service" concept is an important aspect of the Oregon model. The fact that 50% of all technical assistance efforts are triggered by operator requests demonstrates operator satisfaction with the Oregon program. Contributing to this satisfaction is Oregon's ability to offer multiple responses to technical assistance requests. In particular, Oregon's ability to perform on-site visits--an absolute requirement for many municipal wastewater O&M problems--strengthens their service ability for POTW operators.

- Staffing

To be successfully implemented, the demand-response model must be adequately and professionally staffed. Most of the Oregon O&M staff have from 5 to 15 years of experience with the State. The model is currently implemented by most States with an active O&M program. State O&M directors, however, in a USR&E survey identified low funding levels and the corresponding staffing limitations as the major problem with their program. The directors agreed that the low funds mean low salaries and heavy work loads. Together these two factors result in high turnover of State staff. Competent staff are quickly lured away from the State programs by higher paying employment opportunities in the private sector. The long tenure of O&M specialists in Oregon is an exceptional situation.

- Financing

One of the most important ingredients to the Oregon program, as alluded to above, is adequate funding. Oregon spends almost $2,400 per POTW per year to provide a comprehensive as-requested O&M technical assistance model. For this amount, there appears to be a corresponding high level of service and compliance impacts. Whether other States would be willing to spend this amount of money per POTW is a key issue. We were not able to obtain accurate State budgets and cost breakdowns for other State O&M programs, but cost is consistently cited by State water pollution control personnel as a major factor in providing a responsive O&M program.

Potential Model Application

- Types of Needs

Given the features and limitations of the Oregon approach, the model appears to be suitable for the following types of technical assistance needs:

Required Response-	A range--quick to when available
Frequency-	Ad hoc
Complexity-	Basic to moderately sophisticated
Demand-	Continuing, steady; relatively self-defined target audience

- Target Audience

As seen above, State demand-response should be limited to basic well-defined issues for a relatively narrow target audience. Based on these needs characteristics, the Oregon demand-response model could be potentially applied in three program areas: POTWs, drinking water, and solid waste. State responsibilities for regulating and assisting these programs has been active for at least 20 years in most States.

The most appropriate POTW recipients are small and medium-size POTWs (those less than 1 MGD). There are about 12,500 of these POTWs across the country or an average of 250 per State. This is a manageable target audience. The rationale for not emphasizing larger POTWs is that they are able to afford private sector supplied technical assistance.

Medium-size drinking water systems (2,500-25,000 in population) are also an appropriate target group for this model. Larger drinking water systems, like POTWs are able to afford private sector assistance; or they have adequate talent on staff. Smaller systems are excluded as a prime target because they do not fit our small demand criteria--there are 51,000 community water supply systems serving fewer than 2,500 people. The small water supply systems require a different approach as suggested in Section 2.3 below.

In terms of local solid waste technical assistance needs, a State demand-response approach should be limited, as in the case of POTWs and drinking water systems, to relatively simple, narrow, well-defined issues. Thus, resource recovery issues, for example, are generally not suited to this mechanism. Similarly, the informal technical assistance envisioned under this model may not be totally appropriate for hazardous waste emergencies. Rather, traditional conventional solid waste technical assistance needs arising out of landfill design and siting, landfill leachate problems, and landfill operations appear to be best suited for a State demand-response mechanism.

Cost Issues

This service is potentially very expensive for a State to provide, although the Oregon example suggests that the cost per POTW is not excessive. The ad hoc approach does suffer, however, from potential overload responses since the model is based on meeting ad hoc demand. Costs can, of course, be limited by simply providing fewer staff and being less responsive by narrowing the target audience. There is also some flexibility in keeping costs down by varying the type of responses. For example, the State is in a position to regulate how much on-site response is provided. It may be possible to solve the problem over the phone or by referring the community to a specific source of information, such as manual or another nearby community.

This approach does not lend itself to a fee-for-service approach because of the ad hoc nature of the requests.

Implementation Feasibility

Beyond the cost issue, which is not trivial for State government, there is also the issue of adequate staffing to run this model. The Oregon model works because it provides quality technical assistance. Unlike other States, it hasn't been hard by staff turnover problems. This is not the appropriate place to discuss ways to deal with States staff turnover. It should be pointed out, however, that staffing may be the key constraint in this model.

The implementation issue with this model is the issue of targeting. While the model requires a relatively narrow target audience to be feasible

from a cost point of view, this may have political ramifications. How can the State limit demand from non-targeted communities? Legally, of course, it can't. The State and EPA have to encourage or develop alternative suppliers for the small and large communities that are excluded from this strategy.

2.3 CIRCUIT RIDER

Concept

The circuit rider is a technique that delivers programmed technical assistance to recipients. In a pure circuit rider model, the provider visits POTWs, drinking water systems, or whatever on a periodic basis to answer questions, provide troubleshooting assistance, or provide training. Usually, a provider will deal with only a particular set of recipients.

There are variations of the circuit rider model. One variation is to supply both programmed and ad hoc assistance. This variation is useful when provider resources are limited and the desired number of programmed visits is not possible. It is also useful for recipients with moderate or limited technical assistance needs.

Example: The Illinois O&M Circuit Rider Program

For the past four years the Illinois Department of Environmental Protection (DEP) has used EPA Section 106 funds to hire three former POTW operators to provide technical assistance. The operators are hired on year-to-year contracts with salaries equivalent to the top two operator classes in Illinois. Hiring freezes in the DEP dictated the annual contract arrangements, but the Illinois coordinator of the O&M program is working on getting the operators onto the state payroll.

The circuit riders are assigned to the seven water pollution control regional offices. Two operators each cover two regions while the third operator is responsible for the POTWs in three water pollution control regions. Because of their limited numbers, the circuit riders do not conduct routine technical assistance visits to all POTWs. The addition of two or more positions in the near future may allow the implementation of more routine visits. However, the Illinois model is currently limited to only a few routine visits and ad hoc technical assistance.

The present staff of three circuit riders is involved in "several hundred technical assistance requests" per year, according to the Illinois coordinator. Many of these requests are routinely handled over the phone, by referrals to other people, or by sending out information to the operator. Some of the on-site requests may involve a ½-day visit or a two-week level of effort. They have handled many technical assistance requests in which the circuit rider has lived in his RV next to the plant for 2 or 3 weeks. In other cases, a circuit rider may require multiple visits to solve problems.

There are problems of overload in some regions during some periods. In some cases, the circuit riders can rely on the regular state water pollution control staff in the regional offices to help out. There are also occasions when circuit riders have slow periods. In these cases, they are assigned O&M-

related work, like reviewing O&M manuals for treatment plants. There are many instances in which a circuit rider from one region will be borrowed to help out in another region. This is particularly true when a technical assistance request involves an area of expertise that is the baliwick of another circuit rider.

The sharing of expertise across the circuit riders is built into the program. While they hire ex-operators, they do not expect each operator to be proficient in every area of operation across all of the treatment processes. Instead, they use a team concept. They try to hire people with borad skills and with special skills that complement those of the circuit riders and meet the recurring needs of the communities. For example, some of the circuit riders have special skills in laboratory analysis, activated sludge treatment, or small plants, such as lagoons.

Transferability Issues

Two of the issues discussed above in the demand-response model -- enforcement versus technical assistance and staffing -- are relevant here as well. The same discussion applies. There are other issues, however, associated with the circuit rider concept that should be considered.

- Preventative Approach

The circuit rider model is based on the principle that problems should be dealt with before they become major needs. The preventative aspect of this model is its most attractive feature.

- Programmed Assistance

By being programmed, the pure circuit rider model allows the provider, the State, the opportunity to schedule at least a portion of its technical assistance activities. This enables the State to use its technical assistance resources fairly efficiently.

- Flexible Targeting Possibilities

This model is flexible in terms of target recipients -- it can be set up geographically, by size of community, by type of problem. The model is flexible in terms of the number of communities that can be served by a State. For example, one circuit rider can serve 25 communities; 2 can serve 50. The number of recipients is dependent on the amount of staff with which the provider can supply effective service; the size of the circuits; and the number of routine circuits programmed into each circuit.

- Type of Assistance

One of the key attractive features of the circuit rider model is the actual delivery of the assistance -- the model provides on-site service. This is particularly crucial in the operation of many facilities, such as POTWs and drinking water systems, where telephone response or manuals may simply be inadequate.

Potential Model Application

- Types of Needs

In general, the pure circuit rider model is applicable in two types of situations: where municipal needs are recurring or where recipients require periodic on-site training.

- Target Audience

Of the five program areas covered in this report, we view small POTWs (those less than 1/MGD) and small drinking water systems (those serving less than 2500 people) as the most appropriate areas for this type of assistance. Both of these areas require basic assistance because of staff training and because of staff turnover. The Farmer's Home Administration (FmHA), in conjunction with the National Rural Water Association, is in the process of developing a circuit rider technical assistance program for small drinking water systems in 26 Rural Water Association states.

Cost Issues

The cost of this model, as alluded to above, is flexible -- it depends on how many recipients are desired. Because the assistance is programmed with some degree of guaranteed level of service, the model lends itself to a fee-for-service approach. As part of our research with communities receiving technical assistance from States, we explored willingness-to-pay. (See Volume III: Alternative Models for Providing O&M Technical Assistance to Publicly Owned Treatment Works.) We found, for example, that 62% of our sample of POTWs across the country would be willing to pay up to 5% of their O&M budget to the State for periodic circuit rider technical assistance services.

Implementation Feasibility

Being able to attract and retain qualified staff to provide assistance is also a key issue in implementing this model. The targeting problem is potentially not as serious a political issue here since the "favored" recipient may be charged for the service that they receive. In general, small communities are considered less able to pay for technical assistance. Thus, there is less likely to be resentment from other communities.

A more problematic implementation issue is the actual fee-for-service concept that may be tied to the circuit rider model. While we found communities willing to pay for quality circuit rider assistance, we also found States somewhat reluctant to charge for services that they feel they are obligated to provide. There is less of a problem with a public agency charging private clients, but there is very little precedent for a public agency charging another public agency a fee for service. For the fee-for-service aspect of the circuit rider concept to be implemented, then, EPA will probably have to initiate a demonstration program to legitimize the concept.

2.4 PEER MATCH

Concept

The peer match concept is very simple. When one community or State has a specific problem, more often than not, that problem has been faced by another community or State. What is required is a mechanism to match the technical assistance needs of one community/state with the expertise of another. While the peer match concept can be considered basically "good neighbor" assistance, formal peer match generally rests on the following core principles:

- A matching mechanism, in the form of a clearinghouse, to ensure an appropriate match between needs and available expertise;
- An active attempt to expand the network of capable providers by having recipients eventually become providers.

Example: The ECHO Noise Technical Assistance Program

The Each Community Helping Others (ECHO) program was started by EPA's Office of Noise Abatement and Control (ONAC) in January 1978. Assistance in the ECHO program is provided through a group of Community Noise Advisers (CNAs) to communities in need of noise-related technical assistance. According to EPA, 55 communities have received assistance or were in the process of receiving assistance through the ECHO program as of the Fall of 1979.

In addition to the basic peer match principles listed above, ECHO also incorporated the following:

- Subsidy of travel and out-of-pocket costs incurred by recipients and providers (volunteerism, however, is the foundation of the ECHO program),
- An informal quid pro quo commitment from recipient communities concerning the implementation of a noise program;
- A moderate reporting program for providers.

For each peer match, a standard contract is signed between a private contractors (as of December, the National League of Cities) and the provider (and the recipient community if they are expected to incur reimbursable expenses). The only requirement in these agreements is a reporting one. Reimbursable costs include: telephone calls, travel, and lodging and meals.

The other key actor in ECHO program management is the Regional Noise Officer. The RNOs have several ECHO responsibilities:

- Publicize the ECHO program through EPA printed materials and at regional noise workshops;
- Recruit Community Noise Advisers (CNAs) from communities in their region that can provide noise expertise and that are willing to serve as technical assistance providers;
- Serve as the principal matching mechanism.

The CNAs provide technical assistance to recipient communities through three techniques -- on-site visits, phone discussions,and printed materials. Generally, each peer match involves all three techniques. On-site visits often are two-way in nature. Generally, however, the CNA visits the recipient community more often than the reverse. The amount of on-site time spent with the recipient community averages about 4½ days per peer match. Printed materials include EPA materials that the recipient community had not previously received as well as local ordinances and studies from the CNA's community.

CNAs provide a variety of technical assistance as seen in Exhibit 1. The list reflects the broad skills that a CNA must have. In addition it reveals the diverse types of technical assistance needs of the existing recipient communities.

Transferability Issues

In addition to its application in the noise program, the peer match concept is also used in EPA's Solid Waste Program under the agency's Technical Assistance Panels program. Peer match in both programs enjoys broad support by providers and recipients alike. In considering extension of the concept to other program areas, the following issues are relevant:

- Volunteer Principle

Peer match is a formal good neighbor policy. It involves "locals helping locals" and this aspect appears to be one of the reasons for its popularity. The volunteer principle obviously makes the program a relatively low-cost effort. But there are two important implications of the volunteer aspect: 1) Expectations for the quality of assistance should not be excessive; 2) Providers can not be overburdened with too many matches or too great a reporting burden.

- Management

While peer match runs by itself at the technical assistance provision level, it requires a mechanism for making the matches; for recruiting additional providers; for monitoring the program; and for providing limited travel cost reimbursement. These responsibilities are not trivial. Our research in both the solid waste and the noise program revealed that peer match management was crucial to recipient satisfaction. Sloppy and insensitive management in some cases was reflected in the quality of the matching process.

- Reporting

While reporting burden has to be minimized, a moderate reporting mechanism is crucial to tracking the results of the matches. The accountability versus volunteer nature of peer match makes this difficult. But a reporting mechanism is important if successful matches are going to be based on adequate information about potential providers.

- Provider Network

The long-term success of a peer match program is its ability to continue to attract qualified and willing providers and the retain existing providers.

EXHIBIT 1

TYPES OF TECHNICAL ASSISTANCE TYPICALLY PROVIDED
BY PROVIDERS IN ECHO PEER MATCHES*

Technical Assistance	# of times mentioned
• Training in use of noise measuring equipment	7
• Assistance in drafting noise control legislation	6
• Education of public officials	5
• Assistance in designing and doing a noise survey	5
• Training in control techniques for specific noise problems	5
• Design of a public education program	5
• Guidance in developing an overall noise program	4
• Design of a noise attitudinal survey	3
• Guidance in implementing noise programs	3

* Based on USR&E interviews with 10 Providers.

Not only is a reporting mechanism crucial to finding out about potentially new providers, but other devices must also be used to attract and retain providers. It may be necessary to seek informal agreements with recipients to ensure their eventual participation as providers. In addition, providers need to have adequate support and recognition for their activities.

Potential Model Application

- Types of Needs

The peer match is appropriate when the issues are reasonably well-defined and of basic to moderate complexity. The most important requirement is that the issues do not require quick response. For example, a community may know it needs a transfer station, but not know what to look for in selecting a specific type and in designing the site. A peer match model may be inappropriate if technical assistance demand is large. Unless the peer match network is sufficiently developed and the matching mechanism is fairly efficient, there will be demand/supply in balance. The model begins to crumble from overload problems. Potential recipients may give up on the concept and providers may drop out of the network because of overload.

- Target Audience

The peer match model has widespread potential. The model is applicable to both State and local technical assistance needs in air, noise, solid, POTWs, and drinking water. It can be run on a national, regional or State basis for either local or State peer matches.

Costs

There are two direct costs associated with peer match: travel and incidental costs associated with the actual peer match; management costs involved in arranging the match, recruiting providers, monitoring the program, and publicizing the availability of the program. The direct peer match costs -- travel and incidental expenses -- will vary by the size of the area being used for technical assistance. A State peer match program is obviously considerably cheaper than a regional or national one. Our research indicated, for example, that the peer matches in the Noise Program involving 2-3 on-site interactions between recipient and provider and considerable telephone conversation over the course of a 6-12 month match was about equal in costs to the Oregon circuit rider program. In the latter program, costs for 4-6 visits per year providing more complex technical assistance were about $2,400 per POTW.

Implementation Feasibility

The principal implementation issue in this model is provider release time from their normal activities. As we have seen, the peer match is fueled by volunteer time. For providers to supply technical assistance, they must be able to obtain relase time from their local or State responsibilities. In our research of the noise and solid waste peer matches, we did not find this to be a major problem as long as the peer matches did not generally require

more than 2 days per month. This means that the mechanism that is used to manage a peer match program must be particularly sensitive to the burden of each match as well as the number of matches per provider.

2.5 STANDING PEER GROUP

Concept

The relationship between the peer match model and the standing peer group is similar to the demand-response and circuit rider models. The key issue is ad hoc versus programmed interaction. The standing peer group concept extends the basic ad hoc nature of peer matches and establishes peer interaction on a routine and programmed basis. The format for this interaction generally is in some type of formal meeting, workshop, conference, or seminar. It may include paid staff support or expertise in addition to the peers.

Example: The National Rural Water Association

The National Rural Water Association (NRWA) has been funded by the Environmental Protection Agency since 1977 and represents a major attmept by EPA to ensure compliance by rural water systems with the Safe Drinking Water Act (SDWA). There are approximately 51,000 public water supply systems in the United States that serve fewer than 2,500 persons per system. Because of the great number of rural water systems, it is not possible for most State drinking water agencies -- even with the annual EPA program grant -- to adequately meet the technical assistance needs of the rural systems. EPA funding for the NRWA program for FY 1980 is approximately $1.4 million.

Based in Duncan, Oklahoma, the National Rural Water Association contracts with State Rural Water Associations in 26 States to provide technical assistance to rural water systems. The NRWA has grown from 8 to 26 RWAs in just four years. The EPA funds are channelled through the NRWA to each of the RWAs on an annual basis. The RWAs are required to justify their funding each year by an Annual Program Plan which spells out planned technical assistance activities.

A unique feature of the EPA funding arrangement with the NRWA centers around the notion of self-sufficiency. EPA funds decline from $52,800 for a first-year RWA to $48,000 for a third-year RWA. This amount remains stabilized thereafter. RWAs are required by the NRWA to be developing additional local and state funding sources in preparation for the day when EPA withdraws its funding support. All of the RWAs presently supplement their EPA funds with membership dues and, in some cases, with State and other Federal agency funds. Most of the third-year RWAs are actively pursuing State and other funding sources.

Except in a few cases, RWAs rely exclusively on one professional staff person -- a Program Manager -- to provide technical assistance. The Program Manager uses a variety of techniques to provide technical assistance. These include: workshops, on-site visits, peer match, and printed materials. Because of this mix of techniques, RWAs are able to provide both programmed and responsive technical assistance. RWA workshops, generally held monthly in different locations, are the key programmed technical assistance activities.

The type of technical assistance requests that are received by the program manager run the gamut of small water system needs. They include purely technical issues, such as equipment repair, to management issues, such as funding sources for system changes or customer billing. The ability of the program managers to directly deal with the technical issues depends on their training. In some RWAs the technical expertise of the program manager is limited in some specific areas and some technical assistance requests are referred to the State or to a local private firm.

Transferability Issues

- Extent and Type of Interaction

The Rural Water Association model represents a highly structured and managed form of the standing peer group. The RWA model goes beyond the core programmed meeting to include other forms of Technical Assistance, such as on-site visits to member systems. Program management is done on a full-time basis and does not merely include part-time program support.

There are other, less elegant versions of the standing peer group that also may be appropriate models for other programs.

The South Carolina Water and Pollution Control Association (WPCA) is an organization of drinking water and wastewater treatment plant operators along with engineers, consultants and State officials involved with water treatment. Through the use of dues and course fees, the WPCA provides ongoing short courses, workshops, and correspondence courses to its 2,200 respondents. In addition, district chapters have been organized and monthly dinner meetings are held with speakers from State agencies, private engineering firms, and equipment manufacturers. Unlike the NRWA approach, the WPCA is a pure self-financed standing peer group. It does not as yet, however, provide on-site or ad hoc technical assistance -- it offers primarily programmed assistance.

Another less formal variation of the standing peer group involved transportation control planning for air quality. The Delaware Valley Regional Planning Commission (DVRPC), for example, and three other metropolitan planning organizations in the region hold group meetings every six weeks to discuss their transportation control planning effort. The directors of the State air programs in Region IV also meet on a periodic basis to exchange information and advice.

These other examples illustrate the flexibility of the standing peer group in terms of the type of interaction that is possible. The amount, type and frequency of programmed interaction can be adjusted to meet the needs of the recipients.

- Staff Support

The key element of the RWA model is the program manager. In the RWA model, the program manager coordinates monthly workshops and directly provides technical assistance to communities. This type of extensive program support is not required in all of the standing peer group model applications. The Region IV State air directors, for example, rotate administrative responsibilities, such as meeting notices and write-ups, but do not have any ongoing technical support.

The standing peer group requires only administrative support if the interaction falls into the following categories: 1) Technical assistance is provided by outside experts during the interaction; 2) Technical assistance is based on the ability of the participants to share expertise and experiences during the interaction.

Potential Model Application

- Types of Needs

In general, the standing peer group is most appropriate for needs with the following characteristics:

  - Quick response is not required.
  - The issues can be ad hoc as well as recurring. Short-term groups can be formed to deal with very specific ad hoc problems and then be disbanded.
  - The issues can range from basic to complex.
  - The issues do not require individualized on-site interaction (which may be desirable, for example, in troubleshooting a problem at a facility).

- Target Audience

As seen by the examples discussed above, the standing peer group model has wide application for both State and local recipients across all five EPA program areas considered in this project. At the State level, however, the concept should probably be limited to a regional group of participants in order to minimize travel costs.

Cost Issues

There are two key cost issues -- travel costs and program support costs. The NRWA model is the most costly version of the standing peer group because of the full-time program manager and because of the amount of technical assistance being provided. Groups requiring only administrative support will be far less costly. Travel costs are a key consideration in setting up the area of the standing peer group. Even at the local level, sub-State groupings should be developed to minimize the travel cost burden of participants.

The standing peer group should be largely financed by membership dues from participants. The NRWA model, however, illustrates the importance of EPA or outside support. In general, EPA financial support can be used as seed money (the NRWA case) or on a continuing but low level of effort basis.

Implementation Feasibility

Our research indicates that this is one of the most popular forms of technical assistance. Communities and States feel comfortable working together when there are mutual and generic problems to be solved. There are, in fact, many existing self-help groups among State and local environmental programs. EPA financial support can be used as seed money (the NRWA case) or on a continuing but low level of effort basis.

SECTION 3

ALTERNATIVE PRIVATE SECTOR MODELS

3.1 INTRODUCTION

The models discussed in the previous section rely on alternative public providers of technical assistance to State and local governments in EPA program areas. In each case, these models were premised on the notion of using providers external to EPA. This section continues this concept except introduces the private sector as the provider.

Included in this section are two radically different approaches. The first type -- the Consultant Model -- uses the private sector as an arm of EPA. The agency has extensively used the private sector in a research and evaluation capacity for some time. There is not, however, an extensive tradition of using the private sector to supply services to EPA clients -- State and local governments.

The second approach -- Alternative Provider Model -- simply relies on the private sector as a technical assistance supplier virtually outside of the agency's control. Why should EPA care about this model? EPA's interest in this model stems from the fact that it is often in the best interest of the agency to have an adequate and accessible private sector expertise in a particular program area. Private sector capability relieves EPA of being the supplier. While private sector assistance to State and local governments is extensive in many environmental programs, there are areas which could use additional private sector involvement. In these cases, EPA's interest and role is to carefully develop policies to stimulate market demand for private sector services and to stimulate the development, where necessary, of private sector capability.

3.2 CONSULTANT MODEL

Concept

In this model EPA relies on the private sector to supplement agency resources to provide technical expertise. The agency would hire private sector expertise to supply assistance to State and local governments with EPA paying for the private sector cost. EPA would determine when and where the assistance is used; the recipient and EPA would mutually determine the scope and duration of assistance to be provided .

Example: The EPA Panels Program

The consultant assistance portion of EPA's Office of Solid Waste Technical Assistance Panels Program has been operational since September, 1978. As of September, 1979, about 120 panels consultant efforts had been performed. Each EPA region has its own panels consultants. Consultants are selected by EPA and assigned to a region for a specific period of time to deliver assistance on a task order basis. Should the regions decide that a panels consultant is required, they and the consultant will meet with the community to fully define the problem. The consultant prepares a report detailing the results of

this meeting. In some instances this Phase I meeting is able to resolve all of the questions and issues. If this is the case the process stops here.

Frequently, however, the problem is more involved and Phase II assistance is necessary. In this case, a detailed scope of work is written and sent to Headquarters for approval. Upon approval, the consultant will perform the analysis, meeting with community officials when necessary. When the work is completed, the consultant writes a final report and sends it to the regional EPA office for approval, and EPA staff then forward the report to the community. Funds are allocated to the regions on the basis of population and the number of States in each region.

Since regions are free to implement the program as they choose there are differences in the management arrangements. Staffing varies from region to region: some have one or two people full-time on the program while others have several part-time people. Our fieldwork indicated there was considerable turnover in the program, particularly in Regions IX, X, and VII (Region VII had 3 different people running the program in the past year). Regions I, IV and V experienced no turnover since the program began, but Regions VI and VIII had just lost the key panels person.

Of the regions surveyed, only I and V had a priority ranking system for granting consultant assistance requests. Region V recently adopted Region I's model. This system considers feasibility, availability of other funding, the recipient (they prefer to fund States, regional governments, and localities in that order), applicability to the rest of the country, clarity of request, and consistency with EPA and State goals. Region I meets annually with States to ascertain their priorities and every quarter asks them to rank requests. Although the regional panels consultants were hired on the basis of demonstrated expertise in a range of issues, including management planning, hazardous wastes, collection efficiency, and land disposal, the majority of requests and responses have concerned resource recovery issues. Preliminary analysis of FY '79 figures indicated that 41 percent of the requests concerned resource recovery. Land disposal and general solid waste planning were the next most frequently requested topic areas at 19 percent and 15 percent, respectively.

EPA is currently considering which types of issues the consultant panels should concentrate on in the future.

Transferability Issues

- Flexibility

A key feature of this approach is that it provides EPA with expertise on an as-needed basis. There is considerable flexibility in the types of expertise to contract and in the length of time that they are used. Use of the private sector enables the agency to forego hiring personnel to meet needs that perhaps are only temporary.

- Private Sector Interest

One of the problems with using the private sector as an operating arm of the agency concerns potential conflict of interest. The private sector provider in this model gains a trememdous insight into specific community or State problems

at the taxpayers' expense. The danger is that the suppliers then gain an advantage over their private sector competitors in a particular issue area or in a specific community. In order to prevent any appearance of a conflict of interest, EPA has put time constraints on the solid waste panels consultant in later contracting with communities to whom they have provided assistance. This problem, however, is difficult to control. If EPA exercises too much control, then they will not be able to interest capable private sector suppliers to participate as EPA consultants.

- EPA Overview

While the consultants directly provide the assistance in this model, EPA also must oversee the process. This oversight function includes screening recipients, prioritizing requests, contracting, and quality control of consultant services. In our research of the Solid Waste Panels program, EPA administration of the program was crucial. Staff turnover in some EPA regions adversely affected the consultants' assistance.

Potential Model Application

- Types of Needs

The experience of the Solid Waste Panels program suggests that the most appropriate use of consultants in providing technical assistance is for needs with the following characteristics:

- Emerging needs where extensive public sector expertise doesn't exist yet. Examples include: hazardous waste emergencies; PSD modelling in some States; troubleshooting for complex advanced wastewater treatment systems.

- Ad hoc needs. There are two types here: 1) situations where the private sector supplements the State and local community because of temporary overload problems at that level; 2) infrequent situations where it wouldn't be cost-effective for the public sector to maintain ongoing capability.

- Technical and complex issues. State and local governments do not want the private sector to assist them in policy areas. Issues that are complex and require definition before a community can address them are particularly appropriate.

- Target Audience

The application of the consultant panels approach in other program areas appears to be most suitable when the target audience is relatively small. The use of panels consultants for resource recovery issues, for example, was acceptable because the States and communities requiring assistance in this area is relatively limited. Consultants panels are too expensive and adminstratively awkward to use for needs where there is a large demand for assistance.

Examples of needs where consultant panels would be appropriate include:

- Complex enforcement cases in air and wastwater;

- Complex modelling in PSD permits in the air program; and in water quality impact analysis of a proposed POTW;

- Surveillance and analysis of an uncontrolled hazardous waste site;

- Development and demonstration of a prototype community noise surveillance program.

Cost Issues

This assistance is costly since it involves private sector providers and EPA oversight costs. Therefore, EPA has to use this approach judiciously and evaluate the cost of developing its own capability versus contracting out for expertise.

Implementation Feasibility

There are no significant implementation issues involved with contracting out for private sector assistance.

The key issue is management -- it takes money and expertise to manage assistance. Use of the private sector doesn't totally remove EPA's responsibilities for developing expertise in an area.

3.3 PRIVATE SECTOR AS AN ALTERNATIVE PROVIDER

Concept

At some point in the operation of a program, States and local governments have to assume primary responsibility for meeting their own technical assistance needs. This concept perceives EPA's technical assistance responsibility as a sunset one.

Indeed, communities and States have a long tradition in purchasing private sector assistance in the areas of solid waste management, drinking water systems, and POTWs. In particular, larger communities may incorporate into their operating budgets for these areas, funds to purchase unspecified, but expected, private sector technical assistance.

Example: Private Sector Provision of Operation and Maintenance (O&M Services to Publicly Owned Treatment Works (POTWs)

EPA is presently considering policies that would stimulate greater municipal use of private sector O&M technical services. USR&E examined the O&M marketplace and some of our major findings were the following:

- Forty to sixty percent of all POTWs greater than 1 MGD are receiving some type of O&M technical assistance. Most of this assistance has been in the form of ad hoc troubleshooting. POTWs between 1-10 MGD are spending about $2,500-$10,000 per year for these services; POTWs over 10 MGD are spending between $20,000-$50,000 per year for these services.

- Preventative, comprehensive and more costly O&M services are presently not being bought and sold in great amounts in the O&M marketplace. Nor has there been a serious marketing effort by firms to sell these services. Rather, a serious O&M problem has to develop in order to stimulate an enforcement action or community perception of the need for outside assistance.

- There is a small group of O&M specialty firms that are actively marketing contract oeprations services (involves the use of private sector personnel in a POTW to supplement or replace municipal employees). While there is a considerable interest on the part of many civil engineering firms in offering contract operations services, there is not a latent demand for these services; rather, firms have to actively market them in order to convince communities to purchase them.

EPA is presently considering several policy options to further stimulate private sector provision of O&M services and to prod communities into seeking private sector O&M services.

Transferability Issues

- EPA Responsibilities

One of the more troublesome aspects of this policy revolves around EPA's ability to accurately define its technical assistance responsibilities in environmental program areas. At what point in the development of State and local programs should EPA divorce itself from technical assistance? There is obviously no answer to this policy question across all of the five program areas. Some general boundaries can be carved out. For example, EPA provides localities with significant capital cost incentives to construct POTWs. Local responsibility for public health in wastewater management is well established. Consequently, there are substantial grounds for encouraging communities to seek out private sector technical assistance to operate these facilities. Though the issue begins to get fuzzy when one considers EPA's role in requiring certain types of operations and treatment. Local noise control, on the other hand, is a different matter. There is a very small municipal tradition in local noise control. EPA has taken the lead in the 1970's in encouraging communities to develop noise controls. The agency has made noise control at the local level, however, a discretionary matter. Nor has EPA provided any large-scale financial incentives to adopt noise control programs. In this case, when EPA is pushing for environmental control, and in the absence of monetary incentives, it is inappropriate for the agency to expect the local community to initially rush out and use the private sector to meet their technical assistance needs. EPA has to use its own technical assistance as an incentive to initially develop the program.

- Private Market Intervention

Some of the policies being considered by EPA to stimulate private sector provision of O&M assistance envision attempts by EPA to develop private sector capabilities and attempts to stimulate demand for private sector services. Any EPA policies in the free market have to be considered very carefully. The private sector is fearful of too much EPA influence in the marketplace. In general, they prefer EPA to limit themselves to policies that will stimulate demand, and they are not supportive of policies that would affect how they would provide services.

- Private Sector Interest

In some cases, there is limited or no private sector interest in providing technical assistance. In the case of State air programs, for example, basic training needs present a widely dispersed and constantly changing type of demand.

Universities generally do not offer technical short courses that are relevant to job performance in State air agencies. There does seem to be some opportunity, however, to increase private sector service related to monitoring and sampling equipment. For the most part, however, EPA faces a situation where they have to provide basic air training itself.

Potential Model Application

This approach is best suited for basic and recurring needs where municipal responsibility is clear cut and where the community clearly can afford private sector assistance. POTWs, drinking water systems, and municipal landfill operations in communities with a population greater than 10,000 generally meet these criteria.

Cost Issues

In this model, States and local governments bear the costs of technical assistance. EPA's costs are limited to those activities that may involve stimulating supply and demand. There is a wide range of activities that EPA could do and thus it is difficult to discuss EPA costs here.

Obviously, EPA has to carefully consider the cost burdens of recipients under this model. Some communities may be totally unable to afford private sector assistance. Thus, EPA will have to have a residual supply of accessible expertise or stimulate alternative public sector supply arrangements - either State provided or peer match arrangements.

Implementation Feasibility

The feasibility of this policy is dependent on the mix of local technical assistance demand patterns and private sector supply capabilities. Before EPA develops policy that totally embraces the private sector as a principal supplier of a particular type of technical assistance, the agency should carefully consider the market situation, particularly the availability of private sector expertise. In the case of private sector supply of O&M services to POTWs, a multiple policy response is required if EPA is going to depend on the private sector to provide O&M services to POTWs and to bring POTWs into compliance. Our findings suggest that this policy response will have to include a mix of demand stimulation policies, such as enforcement program changes and public education efforts; supply enhancement policies, such as private sector workshops; and quality control mechanisms, such as an O&M Firms Directory and an O&M Community Guidebook for communities.

SECTION 4

CONCLUSIONS

This paper has provided several technical assistance approaches that are potentially applicable for a number of technical assistance needs and in a number of program areas. In general, EPA's objective to develop technical assistance providers outside of the Agency is a difficult, but not insurmountable, task. Several points are relevant in this effort:

- There will always be a demand for State and local technical assistance in the EPA program areas because of changing EPA program requirements (dramatized most significantly in the air program), changing technology and emerging needs (such as hazardous waste), and because of staff turnover in State and local environmental programs. This last factor is probably the single most important factor in stimulating the need for technical assistance.

- EPA should continually reassess the need for and value of its own technical assistance efforts. Because technical assistance programs tend to become self-perpetuating, it is difficult to de-institutionalize them. EPA's regional O&M assistance program to POTWs is a case in point. There has been great resistance by the regions in relinquishing O&M. As a result, EPA has served as a competitor to private sector firms.

- At the risk of belaboring a basic principle in technical assistance, EPA should attempt to keep its technical assistance efforts flexible. The Office of Solid Waste's proposed change in emphasis for the consultant panels program -- from resource recovery issues to hazardous waste -- is an encouraging sign. Flexibility is required to respond to changing technical assistance priorities.

- In designing technical assistance programs, EPA should consider at an early stage how to best shift technical assistance responbilitity away from the Agency to other providers. The National Rural Water Association model, and to some extent many of the noise technical assistance programs, are good examples of this consideration.

- The ability to transfer environmental program responsibility, however, such as technical assistance, to State governments may have reached a saturation point. Our surveys and fieldwork with State environmental programs revealed that technical assistance activities are very vulnerable to budget cuts. In short, delegation to the States can no longer be viewed as the automatic answer for meeting local technical assistance needs.

- Self-help models, fee-for-service models, and private sector assistance -- all offer potential in selected areas. They all require, however, some EPA incentives to be implemented.

Exhibit 2 summarizes some of the principal issues raised in the discussion of the alternative models.

Exhibit 2

COMPARISON OF ALTERNATIVE TECHNICAL ASSISTANCE MODELS

PUBLIC SECTOR ALTERNATIVES

MODEL	KEY FEATURES	POTENTIAL APPLICATION	ISSUES
Demand-Response	o State Provides TA on demand o Response may be by phone; on-site visit or referral	Needs: Suitable for ad-hoc, basic or moderately complex issues that are reasonably well-defined; response may be quick to when available depending on demand. Target Audiences: Narrow target group to keep demand in control, such as medium size POTW and drinking water systems.	o Provide multiple response depending on type of need o Requires good State staff which may be a problem o Potentially high costs unless response is limited or target audience is limited o May be politically difficult to limit target audience
Circuit Rider	o State provides programmed TA o Response is via periodic on-site visits	Needs: Most appropriate for recurring needs or for basic training requiring on-site visits. Target Audiences: Small POTW and drinking water systems where training is needed and where facilities require on-site visits	o Provides a preventative approach to minimize major problems o On-site assistance is best TA o Programmed aspect allows State and recipient to schedule TA efficiently o Flexible circuits possible -- geography, size, type of need can be used as criteria o Costs vary with number and size of circuits; programmed aspect allows fee-for-service payments
Peer Match	o State or locality provides TA to each other o Matching mechanism is used to ensure good matches o Depends on volunteer providers	Needs: Not appropriate for quick response; suitable for well-defined issues of basic to moderate complexity Target Audiences: Peer match network can be set up in any EPA program area	o Provides "locals-helping-locals" TA o Requires good management to ensure adequate providers, proper matches, program publicity, and reporting o Low to moderate costs--basically travel and program management o Key stumbling block is getting release time for providers from normal activities
Standing Peer Group	o Provides for periodic interaction among peers on a routine basis o May include paid staff support for administrative duties and TA expertise	Needs: Not appropriate for quick response; suitable for ad hoc and recurring issues; not suitable for issues requiring on-site TA Target Audiences: Widespread application in any EPA program area at State or local level	o Maximizes use of peer expertise on a regular and volunteer basis; may involve full-time expert to supply additional TA o Very popular form of TA o Costs are basically travel unless full-time TA expert is used o Financed by membership dues, but may need EPA seed money or occasional support

Exhibit 2 cont'd

COMPARISON OF ALTERNATIVE TECHNICAL ASSISTANCE MODELS

	MODEL	KEY FEATURES	POTENTIAL APPLICATION	ISSUES
PRIVATE SECTOR ALTERNATIVES	Consultant Model	o EPA hires private sector expertise on a task order basis to provide TA to States and localities o EPA determines target audience and timing of TA delivery	Needs: Very suitable for emerging needs, complex issues, and emergencies Target Audiences: Recipients should be limited because of high cost of this type of TA	o Flexibility allows EPA to respond to needs on an as-needed basis in different amounts o Requires EPA oversight and quality control o Potential private sector conflict of interest problems o Very costly and paid for by EPA
	Private Sector As Alternative Provider	o Assumes States and localities are responsible for purchasing their own TA o EPA may stimulate TA marketplace with a number of policies	Needs: No special limitations Target Audiences: Recipients that can clearly afford private sector TA; generally larger States and communities	o May be politically infeasible for EPA to divorce itself totally from TA responsibilities o May not have private sector expertise in some areas of TA need o May require significant EPA initiatives to stimulate TA marketplace o EPA has to be very careful how they intervene in the TA marketplace o Recipients bear all TA costs