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**COSTS AND BENEFITS OF THE
NATIONAL DISQUALIFICATION
REPORTING NETWORK**

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EXECUTIVE SUMMARY

Food stamp recipients who commit Intentional Program Violations (IPVs) are disqualified from receiving program benefits. Depending on whether an IPV is the individual's first, second or third offense, the disqualification will be for six months, for twelve months, or permanent.

To help enforce IPV disqualifications, the Food and Nutrition Service (FNS) operates the National Disqualified Recipient Program Information System (DRIPS). DRIPS includes five core activities, three mandated by Food Stamp Program Regulations and the other two optional. The activities are:

- IPV reporting (mandatory). States must submit data on all IPVs to FNS. The form used is the FNS-524.
- Data maintenance and distribution (mandatory). FNS must maintain a current file of IPV information and make it available to all States. The national DRIPS file, containing data from the FNS-524s, is periodically transmitted to States in computer tapes or hard-copy printouts.
- Penalty assignment (mandatory). States must use DRIPS information in deciding whether to assign a 6-month, 12-month, or permanent disqualification to an IPV case. They may actively reference DRIPS data files or printouts. Alternatively, they may rely on rejection messages that come when an FNS-524 is inconsistent with data already in the DRIPS file (e.g., the form indicates a first offense for a case that already has an IPV recorded).
- Applicant matching (optional). States may check DRIPS data for any or all households applying for food stamps. This may involve a manual reference to printouts or an automated matching process. The purpose is to identify applicants with disqualifications that have not been fully served, so they will not be awarded benefits.
- Caseload matching (optional). States may conduct automated matches of their entire caseload with DRIPS data. The purpose is to identify individuals who are receiving benefits despite having unserved disqualifications, so that their penalties can be enforced.

Because little information has been available on the costs and benefits of DRIPS, FNS instituted the present study. It has two objectives: to define a conceptual framework and methodology for assessing DRIPS costs and benefits; and to develop preliminary cost and benefit estimates for DRIPS and for possible alternative approaches to disqualification reporting. The research included interviews with food stamp officials at the national and regional levels and in three States (New York, South Carolina and Virginia). The three States were selected to represent diverse approaches to DRIPS.

Existing data sources do not provide direct measures of DRIPS costs or benefits. A comprehensive and systematic assessment would require a special data collection effort. It would probably require work measurement to estimate the cost of time spent on DRIPS as well as a tracking effort to learn the results of referencing DRIPS data. The present study uses much more limited data (mainly professional estimates from officials involved in DRIPS), so all quantitative results must be used cautiously.

It appears unlikely that the benefits of the mandatory DRIPS activities exceed their cost. Fiscal benefits result from the mandatory activities only when an IPV case has a prior disqualification. This is relatively rare (e.g., an estimated two percent of South Carolina's IPV's). The benefits are not enough to outweigh the combined cost of establishing and maintaining the DRIPS data base, distributing the data, and referencing the data for penalty assignment.

When States make substantial use of DRIPS data through optional applicant or caseload matching, DRIPS can yield positive net benefits. The benefits of caseload matching are estimated to exceed its marginal costs in the two States that use the procedure. Applicant matching generates positive net benefits in South Carolina, where it is used intensively, but not Virginia, where it is used for a tiny fraction of cases. New York and South Carolina make substantial optional use of DRIPS, generating enough benefits to make the overall system cost-effective in both States. South Carolina, the most intensive user of DRIPS, has the greatest net benefit.

State-level disqualification reporting systems may be an attractive alternative to the national DRIPS system. Interstate movement of IPV offenders seems fairly rare (an estimated 4 percent of second offenses are recorded in a different State from the first offense). The fiscal benefit of

identifying these cross-state cases may be less than the cost of maintaining a national database and communicating the data back and forth between the States and national headquarters. Projections suggest that state-level systems could have somewhat greater net benefits than the national DRIPS system. Most States have (or soon will have) the capacity to integrate disqualification reporting into their automated certification systems, making the state-level system a feasible option.

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CHAPTER 1

OVERVIEW

Food Stamp Program regulations prescribe disqualification penalties for recipients who commit Intentional Program Violations (IPVs). IPVs include making false or misleading statements; misrepresenting, concealing or withholding facts; or committing any act that constitutes a violation of the Food Stamp Act, Food Stamp Program Regulations, or any State statute relating to the use of food stamp benefits.

A recipient found to have committed an IPV is normally disqualified for participating in the Food Stamp Program for six months for an initial offense. A second offense warrants a twelve month disqualification. Individuals committing a third IPV are permanently disqualified.

To aid in enforcing disqualifications, the regulations require States to provide the Food and Nutrition Service (FNS) with information on all disqualified individuals. FNS must in turn make the information available to all States. The National Disqualification Reporting Network was established in 1983 to serve these purposes. The network is most commonly known by the acronym for its primary information system, the Disqualified Recipient Information Program System (DRIPS).¹

Disqualification information is reported on a standard form, the FNS-524, which is usually filled out by caseworkers or claimworkers in the local office. The forms go to the State and/or the FNS Regional Office for key entry, and the data are transmitted to the national DRIPS file maintained by FNS in Washington, D.C. FNS sends DRIPS data to the States (sometimes via the Regional Offices) in the form of hard-copy printouts or computer tapes. The States make the data available to local office workers by distributing printouts or maintaining accessible computer files.

Little information is available on the costs and benefits of this DRIPS network. This was noted in an audit by the Office of the Inspector General of USDA in 1987, which recommended that the system's costs and

¹At the time of this writing, DRIPS activities were suspended pending implementation of changes required by the Computer Matching and Privacy Protection Act of 1988. This report concerns the system as it operated before the suspension in July 1989.

benefits be assessed. The purpose of this report is to support FNS in responding to the recommendation.

More specifically, the study reported herein has two primary objectives. The first is to develop a conceptual framework and measurement approach for examining costs and benefits of the current DRIPS system and of possible alternatives. Second, the study uses readily available data from three States to develop preliminary estimates of the costs and benefits of DRIPS and of hypothetical alternative systems in those States.

Most of the data used in the study comes from interviews with officials of FNS' national office; the State Food Stamp Agencies of New York, South Carolina, and Virginia and county agencies within those States; and the three FNS Regional Offices with responsibility for the States. The interviews took place in late 1987, so the report reflects the systems in place at that time (substantial changes that have since occurred in the Virginia system are not incorporated). In addition, data on the national DRIPS file as of June 1988 were analyzed.

1.1 Mandatory DRIPS Activities: Costs and Benefits

National regulations specify three mandatory uses of the DRIPS system. The system must be used:

- as a centralized data capture system, into which States provide information about IPVs;
- as a reporting system, from which FNS provides nationwide IPV information to States; and
- as a reference that States use when assigning disqualification penalties to ensure appropriate disqualification periods.

Regulations also require States to refer to DRIPS information for food stamp applicants who are suspected of having been disqualified in another jurisdiction. Because of the judgmental nature of the requirement, however, we do not include this activity in the minimum set of required DRIPS functions.

Measuring Costs of the Mandatory Activities

In performing the mandatory DRIPS activities, costs are incurred at the FNS National, FNS Regional, State, and county levels. Processing FNS-524s generates costs at the county level, where workers fill out the forms; at the State and/or Regional level, where they are key entered; and at the National level, where the data are merged into the central DRIPS file. The FNS National office incurs costs to produce and distribute monthly and quarterly DRIPS tapes and hard-copy reports, and FNS Regional Offices incur costs to pass reports on to the States. To use DRIPS in assigning disqualification penalties, county workers initiate references and followup information they obtain, and the State makes the files or hard-copy reports available for the references. This pattern is summarized in Exhibit 1-1.

Among these costs, the only ones that existing reporting systems identify separately are the computer-related costs incurred at the FNS national level. For the rest, the DRIPS-related activities are a small part of a larger group of tasks and costs are not broken out. Any analysis of costs must therefore rely on special measurement or estimation procedures. Costs are estimated for the three States in this study by techniques such as interviewing individuals who carry out DRIPS activities to find how much time they spend on DRIPS each month and combining their time estimates with salary data.

DRIPS costs must be calculated in a standardized unit of measure in order to combine the costs for different functions and to compare them across States. The cost per 1,000 casemonths is the most useful summary measure, because it allows us to compare data for States with very different caseload sizes. It must be remembered, however, that this measure combines information about the cost of performing an activity once with information about how often the activity is performed. For example, two States might have exactly the same cost for filling out an FNS-524 and have exactly the same caseload size. But if one State has more IPVs each month, and hence more FNS-524s, its costs per 1,000 casemonths will be higher.

The estimated cost for processing FNS-524s for the three study States ranges from less than \$0.50 per 1,000 casemonths in Virginia to over \$2 in South Carolina, including costs at the county, State, Regional and National levels (see Exhibit 1-2). This variation reflects differences in both the

Exhibit 1-1

Responsibilities for Mandatory DRIPS Activities

<u>Function</u>	<u>Organization</u>	<u>Activities</u>
Processing FNS-524s	County	Filling out and submitting FNS-524s
	State	Data entry (FNS-524s) and transmission
	FNS Regional	Data entry (FNS-524s) and transmission
	FNS National	Receiving, merging, maintaining data; printing and distributing FNS-524s
Data Distribution	FNS National	Generating and distributing monthly and quarterly reports
	FNS Regional	Distributing reports
Penalty Assignment References	State	Maintaining DRIPS file, distributing reports
	County	Worker initiation and follow-up of reference

Exhibit 1-2

Costs and Benefits of Mandatory DRIPS Activities
(Per 1,000 casemonths)

	New York	South Carolina	Virginia
Cost* for:			
FNS 524 Processing	\$1.10	\$2.25	\$0.46
File Maintenance and Data Distribution	0.10	0.40	0.13
Penalty Assignment References	-	2.68	-
Total Cost	1.91	5.33	0.59
Benefits from:			
Penalty Assignment References	-	2.04	-
Net Benefit (cost)	(\$1.91)	(\$3.29)	(\$0.54)

*Excludes indirect cost and development cost.

number of forms submitted and the cost of processing a single form. South Carolina and Virginia have caseloads of about the same size and fairly similar costs for processing a single form (between \$2 and \$3). But South Carolina files about four times as many forms per month,¹ and therefore has a substantially higher cost per 1,000 casemonths. New York's processing cost per form is much higher than in either of the other two States, but New York files a smaller number of FNS-524s relative to its caseload.

Costs for file maintenance and data distribution are relatively low in all three States, estimated at \$0.10 to \$0.40 per 1,000 casemonths. The major cost component is the FNS National cost of maintaining the DRIPS database. Because we allocated these costs to the three States according to the number of records in the DRIPS system, and because South Carolina has many more records than the other two study States (after adjusting for caseload size), South Carolina's costs are highest.

South Carolina is the only one of the three study States that routinely refers to DRIPS data when assigning disqualification penalties. Penalty assignment costs in that State amount to about \$2.70 per 1,000 casemonths, somewhat more than the cost for processing FNS-524s.

Although South Carolina is the only one of the three study States that explicitly references DRIPS for penalty assignment, the DRIPS system is designed to allow what might be termed a "passive reference." When the data from an FNS-524 are merged into the national DRIPS file, a program checks to see whether that individual already has a record in the file with the same penalty number. If so, the FNS-524 is rejected and sent back to the county (via the Region and/or State through which it was submitted). The county could use the information in the rejection message as a basis for adjusting the penalty.

The respondents interviewed in New York and Virginia did not indicate that they use this passive reference procedure, although anecdotal evidence suggests that a number of States do so. We have no empirical basis

¹This does not necessarily mean that four times as many IPV's occur in South Carolina. FNS-524s are also filed to update information existing in the file. Available data do not indicate the reason for the cross-state differences in the volume of FNS-524s submitted.

for estimating the cost of the penalty assignment function with passive referencing. No action would be needed to initiate the reference, but follow-up activities would be required to address FNS-524 rejection messages and resubmit a corrected form. Costs should therefore be less than those estimated for South Carolina, but not zero.

The combined cost for the three mandatory DRIPS activities is about \$5.30 per 1,000 casemonths in South Carolina. Costs in the other two States range from under \$1 to about \$2, but do not include costs for penalty assignment references. If we add South Carolina's penalty assignment cost to the other States' costs for the other two functions, the estimated total for the mandatory activities would range from about \$3.30 in Virginia to South Carolina's \$5.30 per 1,000 casemonths.

As noted previously, these cost estimates are based on very limited data and must be interpreted with caution. A further caveat is that the Computer Matching and Privacy Protection Act of 1988 would require certain modifications to DRIPS procedures, such as instituting a Data Integrity Board at USDA, establishing DRIPS agreements between FNS and each State, and putting into place additional "due process" protections for recipients. Other things equal, these requirements would be expected to increase DRIPS costs.

Measuring Benefits of the Mandatory Activities

Fiscal benefits result from mandatory DRIPS activities when a penalty assignment reference reveals a prior IPV, leading to an increased disqualification period. A recipient who commits an IPV will be disqualified for six months unless he or she is known to have a previous disqualification. If a worker references the DRIPS data and discovers the recipient has one prior IPV, the recipient will be disqualified for twelve months instead of six. This results in a savings to the program of six months of benefit payments (assuming that, without the additional penalty, the recipient would receive food stamps for those six months). If DRIPS indicates that the recipient has two or more prior IPV's, the recipient will be permanently disqualified, saving even more months of benefit payments.

The benefit of referencing DRIPS for penalty assignment thus depends on:

- whether the recipient has a prior IPV (if there is no prior IPV, no saving results from the reference);
- whether a repeat offender has one or more than one prior IPV;
- if the repeat offender were to be incorrectly disqualified for only six months, the number of months of food stamp benefit he or she would receive after the penalty expires; and
- the value of the recipient's monthly food stamp allotment.

None of these factors can be measured directly with available data. Indeed, because some of them involve "counter-factual" outcomes (i.e., what the recipient would do if DRIPS were not used), they can never be measured directly. To obtain some perspective on the likely magnitude of the benefits, however, we developed estimates based on available data. For example, about 98 percent of the South Carolina recipients in the national DRIPS file have only a single IPV recorded. We therefore assume that, when a South Carolina worker references DRIPS for penalty assignment, there is a 98 percent chance that the case being referenced is a first-time offender. In other words, only 2 of every 100 references identify repeat offenders and yield savings. Regarding average benefit amounts and participation patterns, we assume that IPV cases would be like the national food stamp caseload as a whole, as measured in previous research. Based on these procedures, we estimate that a DRIPS reference for a repeat offender avoids about three months of benefits at about \$44 per month.

The estimated benefit from DRIPS penalty assignment in South Carolina is \$2.04 per 1,000 casemonths. No benefit estimate is presented for the other two States because respondents did not indicate any explicit use of DRIPS in penalty assignment.

Net Benefits of the Mandatory Activities

As long as both costs and benefits are expressed per 1,000 case-months, they can be combined directly to estimate the net benefit or cost of the mandatory DRIPS activities to the Food Stamp Program.

In South Carolina, the only study State in which all three of the mandatory components could be observed, the estimated benefits fall substantially short of the costs (Exhibit 1-2). The value of benefit payments avoided through penalty assignment references is less than either the cost of processing the FNS-524s or the cost of executing the references.

These estimates are based on very limited data, including some elements that are available for only a single State. Nonetheless, the large gap between the cost and benefit estimates makes it fairly unlikely that DRIPS would be found cost-beneficial when the mandatory components are considered alone.

1.2 Optional DRIPS Activities: Costs and Benefits

In addition to the mandatory DRIPS activities of providing data on IPVs and using the data to assign disqualifications, States may, at their discretion, use DRIPS data for applicant matching or caseload matching. In applicant matching, a caseworker handling a food stamp application initiates a check of DRIPS data to determine whether any member of the household has an IPV disqualification that has not been fully served. In caseload matching, the county or State compares the entire food stamp caseload to the DRIPS file to identify any individuals currently receiving food stamps who have an unserved penalty.

The three study States exhibit considerable variety in their strategies for the optional DRIPS functions. Only South Carolina conducts both applicant matching and caseload matching. That State automatically checks DRIPS for each food stamp application as part of the initial certification process, and matches the full State caseload to the DRIPS file every month. New York conducts a caseload match quarterly, but does no applicant matching. Virginia's caseworkers check DRIPS for a few applicants, mainly those who have recently moved from another State or whose previous food stamp cases recently closed. Virginia does no caseload matching.

Measuring Costs of the Optional Activities

Costs for applicant and caseload matching are incurred at the State and county levels. For applicant matching, local office workers initiate the match, either through an automated procedure or by manually looking up social

security numbers in DRIPS printouts. The State makes the data available either by maintaining the DRIPS file or by distributing hard copy reports. The workers follow up any "hits" -- that is, instances in which an applicant is listed in DRIPS.

Caseload matching, in contrast, is conducted mainly at the State level. Local office workers only follow up hits.

The costs of applicant and caseload matching are not recorded separately in existing systems. To obtain precise cost information would require work measurement studies of caseworkers as they initiate and follow up matches, as well as the State-level workers who maintain and distribute data and conduct caseload matches. It would also require special analyses of computer activity to separate out DRIPS-related costs. For the present study, however, costs were approximated in the three States through interviews with State- and county-level personnel responsible for DRIPS activities.

The costs of each optional DRIPS activity are influenced by four key factors:

- the number of times the activity is performed (for applicant matching, the question is what proportion of applicants are checked; for caseload matching, how often matches are conducted);
- the proportion of DRIPS references that result in hits, and hence require local caseworker follow-up;
- for applicant matching, whether the DRIPS reference is manual or automated; and
- for caseload matching, the size of the caseload.

The costs estimated for applicant matching in the study States range from under \$1 per 1,000 casemonths in Virginia to nearly \$5 in South Carolina (Exhibit 1-3). This difference reflects two very large but opposite effects. On the one hand, South Carolina references DRIPS for all applicants, while Virginia checks only a fraction of one percent. On the other hand, a single reference in Virginia is much more expensive than in South Carolina (partly because the caseworker must manually review a hard-copy DRIPS printout, and partly because the state-level cost of maintaining and distributing DRIPS data is averaged over a very small number of references.

Exhibit 1-3

Costs and Benefits of Optional DRIPS Activities
(Per 1,000 casemonths)

	New York	South Carolina	Virginia
Cost* for:			
Applicant Matching	-	\$4.83	\$0.81
Caseload Matching	<u>\$0.36</u>	<u>2.79</u>	<u>-</u>
Total Cost	0.36	7.62	0.81
Benefit from:			
Applicant Matching	-	15.19	0.05
Caseload Matching	<u>5.06</u>	<u>5.63</u>	<u>-</u>
Total Benefit	5.06	20.82	0.05
Net Benefit (Cost)	4.70	13.20	(0.76)
Net Benefit from Mandatory Activities	(1.91)	(3.29)	(0.59)
Overall Net Benefit	2.79	9.91	(1.35)

*Excludes indirect cost and development cost.

Caseload matching costs are estimated at about \$0.40 in New York and \$2.70 in South Carolina. South Carolina's cost is higher mainly because its monthly caseload match occurs three times as often as New York's quarterly match. In addition, the relatively fixed cost of implementing a match is spread over a much larger number of cases in New York.

Measuring Benefits of the Optional Activities

Applicant and caseload matches generate fiscal benefits by avoiding food stamp issuances. If a household applying for food stamps has a member with a disqualification that has not been fully served, a DRIPS match will reveal the situation. If the household otherwise qualifies for food stamps, the application will be approved, but the disqualified individual will not be counted in determining household benefits during the remaining term of the disqualification. Similarly, if a caseload match indicates that someone currently receiving benefits has an unserved disqualification, benefits will not be issued for that person for the remaining penalty term.

The value of benefits avoided by DRIPS applicant and caseload matches is determined by:

- the proportion of cases referenced which turn out to have IPV disqualifications that have not been fully served (the "valid hit" rate);
- the average amount of unserved time on the disqualification penalty;
- the average monthly benefits for the disqualified individuals; and
- the average number of months the individuals would receive food stamps if their disqualification status were not discovered.

These factors are very similar to the ones determining the benefits of DRIPS references for penalty assignment, identified in Section 1.1. As discussed there, existing data provide no direct measures of these factors. To develop estimates for the present study, persons responsible for DRIPS operations in the three States were asked to estimate the valid hit rates for applicant and caseload matching. Other parameters were estimated on the basis of distributions in the national DRIPS file and national participation patterns.

The resulting estimates indicate that South Carolina's 100-percent applicant matching avoids about \$15 of issuances per 1,000 casemonths. This compares to about \$0.05 in Virginia, where only a fraction of a percent of applications are matched to DRIPS data. Caseload matching yields benefits between \$5 to \$6 per 1,000 casemonths in both New York and South Carolina.

Net Benefits of the Optional Activities

DRIPS applicant and caseload matching are optional activities, which a State may or may not add to the mandatory set. The first question to ask, then, is whether the marginal net benefit of the optional activities is positive. In other words, does performing these functions add more benefits than costs?

The optional DRIPS activities yield positive net marginal benefits in three of the four cases examined. Applicant matching benefits substantially exceed marginal costs in South Carolina, but fall short in Virginia. Caseload matching benefits exceed marginal costs in both New York and South Carolina. In general, then, one would expect that implementing some optional DRIPS functions would yield greater overall net benefits than conducting only the mandatory activities.

This result is visible in the bottom line of Exhibit 1-3. South Carolina generates positive net benefits from both applicant and caseload matching, more than enough to balance the negative net benefit from the mandatory activities. South Carolina thus has the greatest estimated net benefits, at nearly \$10 per 1,000 casemonths. New York's caseload matching yields enough benefits to create a positive overall DRIPS net result, though at \$3 the net benefit is less than a third of South Carolina's. In Virginia, the absence of any substantial DRIPS use leads to a negative net benefit of over \$1 per 1,000 casemonths.

Caution must be exercised in drawing conclusions about DRIPS from limited data from a non-representative sample of three States. Nonetheless, the data tell a reasonably consistent and plausible story. They suggest that the mandatory DRIPS activities by themselves are not likely to yield positive net benefits. Adding some systematic use of DRIPS for optional applicant or caseload matching, however, can avoid enough issuances to make the overall system's benefits exceed its costs.

1.3 Hypothetical Alternatives to the National DRIPS System

Policy makers need to know not only whether DRIPS' benefits exceed its costs, but also whether greater net benefits could be achieved through some alternative system.

The particular issue that has been raised with regard to DRIPS is whether maintaining a national data base is cost-effective. Perhaps disqualified individuals hardly ever move to another State and apply for food stamps. If that is true, nearly all of the benefit of referencing DRIPS data could be obtained by referencing State-level IPV data bases. And maintaining data at the State level might be less costly than transmitting it to the national level and back again. By similar logic, a county-level system might be optimal if disqualified individuals hardly ever change counties before re-applying for benefits.

Obviously, one cannot measure directly the costs and benefits of these possible alternatives to DRIPS. By projecting from data about DRIPS costs and benefits, however, it is possible to develop a perspective on the likely results of hypothetical systems.

Using this approach, the study considered three hypothetical systems for maintaining and accessing data on IPV's:

- The minimal county system stores IPV information only in paper records in clients' case folders. If a

disqualified individual re-applies for benefits in the same county as part of the same household, the disqualification record will be available. Otherwise it will not.

- The expanded county system features a central county file on IPV disqualifications as well as the information in the case folder. The central file is assumed to be a hard-copy paper file rather than an automated file. Workers can check the central file for any applicant with no prior case folder. They can also check the file when assigning IPV penalties if the current case folder has no IPV recorded. If a disqualified individual re-applies for benefits in the same county, the IPV record will be available.
- The State-level system is analogous to the national DRIPS system. In addition to local hard-copy records in the case folders, an automated IPV data base is

maintained at the State level. Local office workers fill out IPV forms similar to the FNS-524. Depending on the system design, they may have automated access to the system for applicant or penalty assignment references, or they could access hard-copy printouts from the system. IPV records would be available on any disqualified individual re-applying for benefits in the same State.

In addition to the three hypothetical systems, costs and benefits are projected for a national system. The national system is fundamentally the same as the DRIPS system described in previous sections, but costs and benefits are modified to take into account the use of hard-copy IPV information in the case folders as well as the activities specifically related to DRIPS.

Projecting Costs of Hypothetical Systems

The best estimate of a hypothetical activity's cost is the known cost of a similar real activity. Thus the methodology for projecting the costs of hypothetical IPV systems would disaggregate the systems into specific activities, identify analogous activities in the DRIPS system, and apply the measured cost of the DRIPS activities.

Assumptions are required, however, about exactly what activities would be performed in the hypothetical system. The most straightforward assumption is that a State would largely follow its DRIPS strategy in any other IPV system. For example, if it performs applicant matching for all applicants in DRIPS, it would probably do so in an alternative system. Some adjustment is needed for activities that are logically unnecessary or impossible in particular systems. Thus, for example, no IPV data entry form would have to be filled out in the hypothetical county-level systems, which have no automated data files. Similarly, no caseload matching could be conducted in these systems.

Projecting Benefits for Hypothetical Systems

Projecting benefits for hypothetical systems, like projecting costs, must use data about actual systems insofar as possible. This is largely straightforward, because there is no reason to expect any difference between the actual and hypothetical systems in terms of the issuances avoided by a valid hit. The hit rates themselves will differ, however: an IPV reference in the hypothetical systems will access data bases that are not as geographically comprehensive as the national DRIPS file.

To provide a perspective on this issue, we turned to the current DRIPS data base. Individuals with two or more records in the DRIPS file were identified. For each pair of records, representing two successive penalties for the individual, geographic data were examined to determine whether the individual had changed counties or States in the interim between the records. The DRIPS data have some important limitations for this use. Most importantly, the location fields on DRIPS records can be updated, and therefore may not represent the client's location at the time the record was initially entered. Because practices like updating records may differ from State to State, only values for the median State were used.

A median of 91 percent of the penalty pairs in the DRIPS file involved two penalties recorded in the same county of the same State. Five percent of the pairs involve different counties within the same State, and four percent involve two different States. As a rough rule of thumb, then, one might expect a State-level data base to have 96 percent of the DRIPS file's information relevant to IPV cases in that State. A county-level file might have 91 percent of the applicable DRIPS information.

Hypothetical System Estimates Based on the Study States

To implement the projection approach described above requires reliable data on actual DRIPS costs and benefits, information about the procedures that States or counties would actually use in implementing IPV systems, and good data on the proportion of IPV cases that cross county or State borders.

In the present study, only crude approximations of any of these factors are available. Nonetheless, projecting costs and benefits for the hypothetical systems as they might be implemented in the three study States is useful to illustrate some of the factors that might determine an IPV reporting system's cost-effectiveness. Estimates were therefore constructed for each of the three hypothetical systems, plus a DRIPS-like national system¹, for each of the three study States. The results are summarized in Exhibit 1-4.

¹In addition to DRIPS activities, the national system includes the use of IPV information in case folders. In contrast, the DRIPS estimates presented in Section 1.1 and 1.2 include only those activities specifically related to the automated DRIPS system.

Exhibit 1-4

Costs and Benefits of the Hypothetical IPV Systems
(Per 1,000 casemonths)

	<u>New York</u>				<u>South Carolina</u>				<u>Virginia</u>			
	Minimal County	Expanded County	State	National	Minimal County	Expanded County	State	National	Minimal County	Expanded County	State	National
Mandatory Activities												
Cost	\$0.01	\$0.01	\$1.67	\$1.91	\$0.04	\$1.68	\$3.17	\$5.33	\$0.01	\$0.21	\$1.56	\$0.60
Benefit	0.25	0.25	0.25	0.25	1.47	1.68	1.97	2.04	0.35	0.35	0.35	0.35
Net Benefit	0.24	0.24	(1.42)	(1.66)	1.43	0.00	(1.20)	(3.29)	0.34	0.14	(1.21)	(0.25)
Optional Activities												
Cost	0.06	0.06	0.33	0.42	0.06	53.12	6.86	7.62	0.06	0.16	1.18	0.87
Benefit	2.60	2.60	7.42	7.66	2.74	13.94	20.22	20.82	2.86	2.91	2.91	2.91
Net Benefit	2.54	2.54	7.09	7.24	2.68	(39.18)	13.36	13.20	2.80	2.75	1.73	2.04
Overall Net Benefit	2.78	2.78	5.67	5.58	1.25	(39.18)	12.16	9.91	3.14	2.89	0.52	0.79

The estimates suggest that, when the mandatory activities are considered alone, only the county-level systems yield positive net benefits. These paper-based systems have relatively small benefits, but even smaller costs. Any automated system requires a data entry procedure, and the cost estimates for systems involving data entry consistently exceed the estimated benefits from penalty assignment references.

For the optional activities (applicant and caseload matching), projected net benefits are generally more favorable with the automated State and national systems than with the county-level systems. The advantage of the automated system depends on utilization. South Carolina, for example, is assumed to conduct both applicant and caseload matching. The net benefit for the State and national systems is over \$13 per 1,000 casemonths, compared to under \$3 in the minimal county system and negative net benefits in the expanded county system (due to the high cost of manually referencing the paper file for all applicants). In New York, which is assumed to do caseload matching but not applicant matching, net benefits are over twice as high in the automated as the paper-based systems. Virginia is the exception: with an assumption of no caseload matching and extremely limited applicant matching, net benefits are slightly higher in the paper-based systems than the automated ones.

When the mandatory and optional IPV activities are combined, the pattern seen for the optional activities is dominant. The State and national systems have substantially higher estimated net benefits than the county-level systems in South Carolina and New York. Overall net benefits are somewhat greater for the State system than the national one in these two States, but the difference is not as striking as that between the automated and the paper-based systems. In Virginia, the assumed low usage causes both patterns to be reversed. The paper-based systems have greater net benefits than the automated ones, and the national system is more favorable than the State-level system.

Feasibility of State-level Systems

One cannot conclude from the limited analyses in this study that State-level IPV systems would be preferable to DRIPS. Nonetheless, because the State systems had the highest estimated net benefits (under assumptions of substantial usage), it is important to consider whether such systems are a realistic possibility.

Implementing a State-level system is probably feasible for most States. A State could use either of two approaches to constructing such system. One approach would be to maintain a separate IPV file. All States are already required to perform certain matching functions in their Income and Eligibility Verification Systems (IEVS), and IPV matching might be integrated into these systems. The second approach would be to maintain the necessary IPV information within the State's automated certification system, as part of its master household files. Although the available data are limited, it appears that about 40-50 percent of the States already maintain enough information in their household files to perform at least the minimal IPV reference functions, and FNS officials indicate that another 20-30 percent of the State will soon have that capability.

Presumably these two approaches to a State-level system would have differing costs, although their benefits should be similar. The hypothetical system estimates are based on the independent file approach, because no example of the household master file approach was seen in the three study States. One might expect the household master file approach to be less costly, which would presumably lead to greater net benefits than those estimated above for the State-level systems. Taken together with the likely increase in national DRIPS costs to meet requirements of the Computer Matching Act, this reinforces the idea that the State-level system is a policy option worth exploring.

CHAPTER 2

PURPOSE AND METHODOLOGY OF THE STUDY

The USDA Office of Inspector General (OIG) recently conducted an audit of the DRIPS system.¹ Among its key findings were that:

- State agencies were not reporting a material number of disqualifications;
- State agencies were not using the DRIPS data to make disqualification determinations; and
- FNS does not have a system in place to track the benefits and costs of DRIPS.

OIG made five recommendations to FNS to correct these problems. The first four recommendations concerned ways of ensuring that the DRIPS system operates as intended, such as making sure that States receive DRIPS data and periodically reviewing their use of the data.

The final recommendation was that FNS "perform a study to assess the cost/benefit of the DRIPS system, and redesign the system if necessary to fully comply with the intent of applicable laws and regulation."

The purpose of this report is to support FNS in responding to the OIG recommendations. Specifically, the study objectives are to:

- establish a conceptual framework for a cost-benefit analysis of the DRIPS system, defining the types of benefits and costs that should be considered in assessing the system;
- develop preliminary estimates of the relative magnitude of the costs and benefits of the DRIPS system using three States with diverse approaches to DRIPS; and
- define state-level and county-level alternatives to the national DRIPS system, and use available data to project the possible costs and benefits of these alternative systems.

¹Audit of the National Disqualification Network, USDA Office of Inspector General, March 26, 1987.

The study's results are presented in the following chapters. We begin with a brief description of the DRIPS system in general and its implementation in the three study States (Chapter 3). The conceptual framework for measuring costs and benefits, as well as preliminary estimates from the three study States, are presented in Chapters 4 (costs) and 5 (benefits). Chapter 6 then defines some possible alternatives to the national DRIPS approach, and projects costs and benefits for hypothetical implementations of these approaches. Finally, Chapter 7 describes the methodology that might be used if FNS desired to undertake a more comprehensive and systematic assessment of DRIPS' costs and benefits.

To assess the use of DRIPS and collect data on the system's costs and benefits, Abt Associates project staff conducted in-person interviews with individuals from three State Agencies. The States included in the study, chosen by FNS to reflect the wide range of State levels of effort devoted to the use of DRIPS, were New York, South Carolina, and Virginia. In-person interviews were conducted with officials in the three State Food Stamp Agencies and two FNS Regional Offices (Northeastern and Southeastern). In addition, telephone interviews were conducted with officials of the Mid-Atlantic Regional Office and five county Food Stamp Agencies (one or two in each State).

The interviews conducted in this study provide strong descriptive information on how DRIPS operates in three States. It is important to note, however, that the data on costs and benefits have serious limitations. Most DRIPS activities are combined with other kinds of activities in cost reporting documents. It was therefore necessary to estimate costs by asking responsible officials for their "best guess" about the DRIPS share of the time or other resources represented in a particular budget category. Even less documentary information is available concerning DRIPS benefits, so benefit estimates rest on a substantial number of researcher assumptions as well as respondents' best guesses. Finally, the data come from only three States, and those three were selected to illustrate a range of DRIPS approaches rather than to be representative of the majority of States.

CHAPTER 3

THE DRIPS SYSTEM

Food Stamp Program regulations prescribe cumulative penalties for recipients who commit Intentional Program Violations (IPVs). IPVs include making a false or misleading statement; misrepresenting, concealing or withholding facts; or committing any act that constitutes a violation of the Food Stamp Act, Food Stamp Program Regulations, or any State statute relating to the use, presentation, transfer, acquisition, receipt, or possession of food stamp coupons or Authorization to Participate documents (ATPs).

A recipient found to have committed an IPV receives a six month disqualification from program participation for the initial offense. A second offense warrants a twelve month disqualification, and individuals committing a third IPV are permanently disqualified from program participation. (IPV cases may be adjudicated by courts with the appropriate jurisdiction and may receive penalties differing from the regularly prescribed penalties.) Disqualification applies nationwide--that is, an individual disqualified in one project area may not receive benefits in another.

A disqualification may be either "active" or "pending." An active disqualification results when the individual would be eligible on all other grounds to continue receiving food stamp benefits and program ineligibility is solely due to the IPV. The active disqualification begins immediately when the State Agency establishes the IPV. Pending penalties, on the other hand, result when program ineligibility is independent of the IPV (e.g., when the individual's income exceeds the eligibility limit) or when the individual leaves the State before the State Agency has had a chance to apply a disqualification. A pending disqualification becomes active when the individual reapplies and is found otherwise eligible for food stamp benefits.

To aid in enforcing disqualifications, the regulations require States provide to FNS information on all disqualified individuals. FNS must in turn make the information available to all States. The National Disqualification Reporting System (DRIPS) was established in 1983 to serve these purposes.

Food Stamp Program regulations require States to report to FNS information on all IPV disqualifications within 30 days of the effective date of disqualification. FNS must make all of the data available for use by any State Agency. States must, at a minimum, use the data:

- "to determine the eligibility of individual program applicants in cases where the State Agency has reason to believe a household member may be subject to disqualification in another political jurisdiction, and
- to ascertain the appropriate penalty to impose, based on past disqualifications, in a case under consideration."

Reporting on IPV's and using the data as described above are **mandatory** activities. The regulations also specify two **optional** uses of IPV data:

- "to screen all program applicants prior to certification, and
- to periodically match the entire list of disqualified individuals against their current caseloads."

In subsequent discussion, we shall refer to these two optional uses of IPV data as "applicant matching" and "caseload matching," respectively.

State Agencies are not required to verify a disqualification with the county or State where the disqualification originated. Identification of a disqualified individual on the DRIPS system is held to be sufficient proof that the individual has committed an IPV and a State Agency may process a disqualified case on the basis of information provided by DRIPS. Only in cases where the determination of an IPV is reversed by a court or appropriate jurisdiction may the DRIPS system be purged of information relating to the disqualification.

3.1 Functional Description of DRIPS

For purposes of this analysis, we define the DRIPS system to include all activities associated with recording data for the national DRIPS file or using that data, as well as the maintenance of the national file itself.

Excluded from this definition are activities that States may carry out to enforce disqualification regulations which are unrelated to DRIPS. The most common such activity is simply to maintain records of individuals' disqualifications in their case folder, and to access the case folder when an individual reapplies for benefits or has a disqualification penalty assigned. (Chapter 5, which considers hypothetical alternatives to the DRIPS system, incorporates the use of case folders in the hypothetical systems.)

Information flowing into the DRIPS system originates at the county office level and is represented on the Disqualified Reporting Form (FNS-524). FNS-524 forms are used to add, change or delete records from the DRIPS National file. (Appendix A presents a copy of an FNS-524 form.) FNS-524 forms indicating the establishment of an IPV disqualification are denoted by a letter "A" (for add) in the activity code section of the form. An add condition applies regardless of the case's disqualification number (i.e., first, second or third offense).

Activity code "C" is used to change an item on an existing record in the file. For example, a change condition would apply in updating a pending disqualification to an active status when an individual reapplies for program benefits. All items in a particular record may be changed except the case's social security number. To change the social security number, the existing record must first be deleted. A new record (reflecting the changed social security number) may then be submitted.

Existing records may only be deleted (activity code "D") when the disqualification decision has been reversed.

Claimswokers in the local office prepare an FNS-524 on each IPV case and submit it either to the State Agency responsible for program fraud or directly to the responsible FNS Regional Office. The difference depends on the administrative responsibilities of the county. Counties in State-supervised systems are more likely to submit FNS-524s directly to the Regional Office than those in State-administered systems. If the county submits the FNS-524s to the State, the State then passes them on to the Regional Office.

The FNS-524 information is entered into the DRIPS database at the Regional Office. Data are key-entered into a temporary file which is transmitted to the Washington Computer Center (WCC) through a telecommunication

Once available, the DRIPS data are used for the mandatory or optional purposes identified earlier. Typical procedures are as follows:

- Penalty assignment. A recipient who is found to have committed an IPV must be disqualified, with the length of the penalty depending on whether the recipient has committed previous violations. The caseworker or claimsworker handling the case refers to the DRIPS data (through either a manual reference or an automated one). The worker needs to know whether any previous IPV's are recorded and, if so, how many.

An alternative to the above procedure is a "passive reference." The worker fills out an FNS-524 for the violation, indicating that it is the individual's first IPV and assigning a disqualification penalty of six months. If the DRIPS file already contains one or more IPV's for the individual, the FNS-524 will be rejected and the worker knows that a longer penalty is required.

- Applicant matching. When a household applies for assistance, the caseworker responsible for certifying eligibility may reference the DRIPS data. This may be a manual reference (looking to see whether any of the names or social security numbers of household members are on the DRIPS printout) or an automated check of a DRIPS computer file. Any household member found to have a pending disqualification or an active disqualification that has not been fully served will not be eligible for benefits.
- Caseload matching. A State Agency may periodically compare its entire caseload to the DRIPS file. If any individuals with pending or active penalties recorded on the DRIPS file are receiving food stamp benefits, the information is passed to caseworkers in the local offices. The caseworker is responsible for making sure the disqualification information is accurate and, if so, re-budgeting the case to remove the benefits for the disqualified individual.

Use of the DRIPS system varies greatly across States, variation which is reflected in the three States included in this study. To provide perspective on the range of DRIPS usage, the following sections provide descriptions of how DRIPS is used in South Carolina, New York, and Virginia.

3.2 South Carolina

Of the three States visited as part of this study, South Carolina makes the most extensive use of national DRIPS data. South Carolina also has the most fully automated system. Disqualification reporting as well as procedures for referencing DRIPS data are incorporated into the State food stamp automated data management system, called SCID-III.

FNS-524 Reporting. The need for paper FNS-524 forms is nearly eliminated in South Carolina. Following IPV disqualification and establishment of a fraud claim against disqualified individuals, FNS-524 data are directly key-entered into a statewide update file by claimworkers in each county. On the 15th of each month, the update file is written onto a computer tape and sent directly to the WCC, where it is edited and merged into the National DRIPS file. The Regional Office has no involvement in this operation.

Claimworkers are responsible for the accuracy of key-entered data. Edit checks at data entry are designed to reduce the likelihood of errors and data rejection at the national level. South Carolina employs a state-level National Disqualification Coordinator (NDC) who has the ability to override data entry edits (e.g., in the case of assigning nonregular penalties) and is the only individual capable of deleting records from the State update file.

South Carolina imposes a one- to two-week period each month during which existing update records may only be referenced but not changed. This limited access period corresponds to the lag between submission of the update file to WCC and receipt of the national file reflecting the South Carolina updates. The limited access is necessary because changes made to update file records during the lag period would not be incorporated into the national file.

Upon receipt, the national file is copied and retained for query purposes. The file is then made more manageable by first selecting only those records with unexpired penalties and then deleting all data from the selected file except social security numbers. This limited file is used for caseload and applicant matching.

Applicant Matching. DRIPS data are used in South Carolina to screen all applicants for food stamp benefits through an automated match procedure conducted during the processing of applicant information. The match procedure keys on household member social security numbers and is automatically invoked when the caseworker completes data entry of an applicant's household information into the SCID-III system.

A claimsworker is notified of any matched social security numbers. The claimsworker then queries the unedited copy of the national file retained on the system to obtain details of the disqualification. If the applicant has a pending disqualification, the claimsworker continues to process the application; if the applicant would be approved for benefits, the disqualification is invoked and the individual begins serving the penalty. The individual's penalty is then assigned to an active status on the State update file. Questionable disqualifications (e.g., only partial household information matches) are turned over to the National Disqualification Coordinator (NDC), who validates the disqualification with the originating county or State.

Caseload Matching. The DRIPS file is also matched each month with the current South Carolina master file of food stamp participants. The primary report generated by this process is a county-level listing of individuals receiving food stamps with pending or unexpired active disqualifications. County office claimsworkers review each case, validate the disqualification with the originating county and determine the appropriate action required.

If a match identifies a penalty that has not been served and if the case would be active in the following month, the claimsworker completes an FNS-524 form to change the case's effective disqualification date to the beginning of the following month. The claimsworker also instructs the client's caseworker in writing to disqualify the recipient on the State master file after the recipient participates (receives stamps) in the current month.

If the penalty has not been served and the case will not be active in the following month, the claimsworker instructs the caseworker in writing to inform the claimsworker when the recipient is again eligible to participate. An FNS-524 form would be submitted at that time. (The system will identify the recipient when the case reopens.)

The matching of national DRIPS data with the South Carolina master file generates a second report, which lists currently disqualified individuals on the State file requiring follow-up action. This report identifies South Carolina recipients whose disqualifications have expired or will expire at the end of the month. The caseworker places these individuals back in the household budget if the case is active in the current month and will be active in the following month. If the case is active in the current month but will not be active in the following month, the caseworker still places the individual back in the household budget (in the event the case reopens).

The South Carolina caseload match procedure generates three other reports. These primarily serve informational purposes and do not require caseworker or claimsworker action. The reports are:

- a monthly listing of individuals who have been on the South Carolina file who have changed State location since the last DRIPS update;
- a quarterly listing of South Carolina disqualified individuals currently on the South Carolina update file; and
- a quarterly listing of South Carolina cases on the national disqualification file as of the current date.

Disqualification Penalty Assignment. Before a Disqualification

FNS-524 Reporting. Following disqualification of an individual for an IPV, a county claimsworkeer prepares an FNS-524 form and submits it to the State Case Integrity Unit (SCIU). Operators at the SCIU key enter the FNS-524 information into a microcomputer database of disqualified individuals in the state. Edit controls prevent the entry of invalid or missing data. Each month, SCIU prints out the DRIPS case activity (i.e., additions, changes, or deletions) during the month onto a facsimile of the FNS-524, and submits the forms to the North Eastern Regional Office (NERO).

NERO staff enter data from the FNS-524 facsimiles into a temporary workfile. Periodically, the workfile is electronically transmitted to the WCC, where it is processed into the national DRIPS file. Accepted data are entered into the DRIPS file, and records rejected by the automated edit programs are sent back to the Regional Office. If possible, the error is resolved at the Regional Office. Unresolvable errors are sent back to the State for resolution.

The primary advantage New York finds in maintaining a state-level database of disqualifications is the retention of historical information, including any changes made to records. Changes made to records on the national DRIPS file are overwritten on the existing record, which can mean that historical information is lost from the national file. For example, the location of the county in which the penalty originated may be overwritten by a change made to the record. Validating a disqualification would be difficult, if not impossible, without this information. Although disqualification validation is not required, many States do not have full confidence in the DRIPS system and choose to validate penalties prior to removing an individual from the household budget.

Applicant Matching. New York county offices do not conduct any matching of applicant information with the DRIPS data.

Caseload Matching. Once each quarter the New York SCIU receives a taped copy of the national DRIPS file from FNS. The file is first screened to select only those cases with pending disqualifications. These are matched with the State master file of food stamp participants.

SCIU validates disqualifications for the matched cases with the originating county or State. Data on the valid disqualifications are then

forwarded to the county, where a claimsworker removes the individual from the household budget.

The primary distinctions between New York and South Carolina caseload match operations are in the content of the National DRIPS file and the administrative unit responsible for disqualification validation. New York matches its participation file with a subset of the national file (pending disqualifications only). South Carolina conducts this match with all unexpired disqualifications. New York also validates the disqualifications of all matched cases at the State Agency level. Thus, county office involvement is limited to removing the client from the household budget, submitting an update FNS-524 form, and notifying the client of the action. South Carolina claimsworkers have the additional responsibility of validating the matched case disqualification.

Disqualification Penalty Assignment. Penalty assignment for IPV cases in New York is essentially independent of the DRIPS system. IPV cases are turned over to the District Attorney's Office, which decides whether to adjudicate the case or use a Disqualification Consent Agreement. In both situations, information about any prior disqualifications from the individual comes from the case file maintained by the county office.

The county submits to the State an FNS-524 reporting the assigned penalty. SCIU checks its microcomputer file of disqualification data before passing the FNS-524 on to the Regional Office. When the Regional Office transmits the data to WCC, WCC checks for duplicate records as part of the process of merging the new FNS-524 data into the national data base. In principle, either of these checks could reveal a prior penalty that the county office did not know about, and this could result in an adjustment to the recipient's penalty. In practice, however, county office personnel could recall no instances in which a state- or national-level check led to a penalty adjustment.

3.4 Virginia

At the time of the study visits, Virginia's DRIPS system was a fully manual operation. The State was developing an automated database management system which, among other features, permits quarterly caseload matches of the Virginia master file with the DRIPS national file. This system has since been

implemented, but no data on the new system were available. The discussion below describes only the system that existed in 1987.

FNS-524 Reporting. Claimsworkers at the local food stamp office prepare FNS-524 forms for each disqualified individual and submit the forms directly to the Mid-Atlantic Regional Office (MARO). Data entry of the FNS-524 information is conducted at MARO and the data are transmitted to the national DRIPS database at the WCC. Rejected FNS-524 data is sent directly from MARO to the Virginia county originating the disqualification.

Applicant Matching. FNS sends the Virginia State Fraud Control Coordinator (SFSC) 124 printouts from the DRIPS national file. The printouts list disqualified cases from Virginia and the five States contiguous to Virginia. The SFSC distributes the printouts to each of the 124 county offices in the State. Applicant matching is conducted by caseworkers manually referencing the printouts. The printouts are used for only a relatively small proportion of program applicants, mainly applicants from out-of-state or recently closed cases (as identified on the application).

Caseload Matching. Virginia does not currently match DRIPS data with the state master file of program participants.

Disqualification Penalty Assignment. Virginia reports no routine use of DRIPS data in determining the proper penalty to assign IPV cases.

CHAPTER 4

DRIPS SYSTEM COSTS

The critical question to be answered about the DRIPS system concerns that system's cost-effectiveness. This chapter addresses the first half of the question, examining DRIPS costs incurred by the three selected States. The majority of the chapter is devoted to DRIPS direct operating costs. These costs reflect the resources used to carry out DRIPS functions on a day-to-day basis. Sections 4.1 through 4.6 cover the major components of DRIPS' direct operating cost.

Another aspect of operating costs is indirect cost. Indirect costs reflect the resources used to support all Food Stamp Program activities, such as management time and overhead expenses. Section 4.7 addresses the issue of indirect cost and the effect of this component on direct cost estimates.

The final kind of cost examined in this chapter is the cost incurred during the development of the DRIPS system. Development costs in this analysis are considered a one-time expense and are not incorporated into the direct operating cost estimates. System development costs are presented however, to provide an understanding of the overall magnitude of DRIPS system cost.

To the extent possible, cost estimates presented in this chapter are based on existing reported data. However, existing systems do not contain data on the DRIPS system in separate detail. Much of the analysis is therefore based on knowledgeable individuals' estimates, obtained through interviews with FNS National office, Regional Office, State Agency, and county office personnel responsible for DRIPS activities in their jurisdiction.

Two general procedures were used to obtain labor cost estimates. Where particular individuals or groups devote a substantial proportion of their time to DRIPS activities, we asked for estimates of the percent of time allocated to DRIPS and the salary levels of the individuals. Where DRIPS was an occasional activity, as with claimworkers, we asked how long a worker typically takes to complete the task and how often it occurs.

This methodology obviously leaves considerable margin for error, and the total cost estimates must therefore be interpreted cautiously. In general, however, the cost patterns appear plausible and they serve as a reasonable guide to the relative importance of the various resources used in DRIPS operations.

4.1 Framework for Examining Monthly DRIPS Operating Costs

Monthly operating costs of the DRIPS system are most easily organized in terms of the activities performed and the food stamp administrative unit responsible for conducting them. DRIPS-related costs are incurred during the conduct of five activities:

- entry of FNS-524 data and maintenance of the DRIPS file;
- report generation and distribution;
- caseload matching;
- applicant matching; and
- disqualification penalty reference.

FNS-524 processing and report generation and distribution activities are performed at four levels of program administration: FNS National, Regional Office, State Agency, and county office. State Agency and county office personnel conduct caseload matching, applicant matching, and penalty reference activities.

Cost estimates in this chapter are presented at the summary level in sections corresponding to the five DRIPS-related activities. (Appendix C presents a more detailed discussion of DRIPS-related costs.) The cost of a particular activity is defined in terms of the different program administration units participating in the activity. For presentation purposes, cost items are divided into labor (including fringe benefits), computer-related costs, and other direct costs.

Cost estimates are presented in terms of two units of measurement. The first unit expresses the overall monthly cost of an activity for a State. Overall monthly costs provide a useful measure of total resources devoted to the system but can not be meaningfully aggregated across levels of administration (e.g., overall FNS cost cannot be added to the costs in the three Regional Offices and State Agencies.)

To overcome this limitation, costs are expressed in terms of a second unit of measurement. This unit normally expresses costs in terms of the main activity for which the cost is incurred. For example, the cost of processing FNS-524 forms is expressed as the cost per FNS-524 entered. Some activities however, can not be clearly expressed this way. For example, the object of report generation and distribution activity would seem to be one report. Yet variation in the format and content of reports reduces the clarity of this measurement. For this activity, a general measure of DRIPS activity is used.

4.2 Monthly FNS-524 Costs

Data enter the DRIPS database on the FNS-524 through a process that typically involves four levels of program administration. The information flow originates at the county office level, where claimworkers prepare the FNS-524 forms. State Agencies commonly serve as the intermediary between county office and Regional Office levels. A State Agency receives the completed forms from county offices and submits them to the Regional Office. Regional Office staff key enter the data and periodically transmit the information through a telecommunications link to the national DRIPS computer facility. Transmitted data are edited at WCC and the accepted data are merged into the national file. Rejected data follow a reverse course - through the Regional Office and State Agency to the originating county office. The national file is maintained by WCC.

The estimated costs for these activities in the three study States are presented in Exhibit 4-1. As shown in that exhibit, the total monthly cost ranges widely, from about \$160 in Virginia to more than \$3,100 in New York. Similarly, processing cost per FNS-524 ranges from \$2.43 (Virginia) to \$14.02 (New York).

FNS National Costs. FNS spends roughly \$1,431.69 each month to process FNS-524 information. We allocate a share of this cost to each State based on the number of monthly FNS-524 forms submitted. This approach generates a constant FNS cost per unit FNS-524 of \$.18. Overall monthly FNS costs range from \$38.43 (New York) to \$11.25 (Virginia).

The primary FNS National cost component is labor, which accounts for nearly 45 percent of the subtotal. Staff activities include handling taped

Exhibit 4-1

Monthly FNS-524 Processing Cost Summary

	New York		South Carolina		Virginia	
	Monthly Cost	Cost per FNS-524	Monthly Cost	Cost per FNS-524	Monthly Cost	Cost per FNS-524
FNS National Cost*						
Labor	\$17.09	\$0.08	\$20.10	\$0.08	\$5.00	\$0.08
Computer						
On-line	\$9.46	\$0.04	\$11.12	\$0.04	\$2.77	\$0.04
Workfile	\$0.02	\$0.00	\$0.02	\$0.00	\$0.01	\$0.00
Merge	\$3.81	\$0.02	\$4.48	\$0.02	\$1.11	\$0.02
Other Direct	\$8.05	\$0.04	\$9.46	\$0.04	\$2.36	\$0.04
Subtotal	\$38.43	\$0.18	\$45.18	\$0.18	\$11.25	\$0.18
Regional Office**						
Labor						
Data entry	\$39.18	\$0.18	NA	NA	\$6.24	\$0.10
Form prep	\$135.81	\$0.61	NA	NA	\$45.85	\$0.71
Computer	\$4.70	\$0.02	NA	NA	\$0.57	\$0.01
Other Direct	\$7.93	\$0.04	NA	NA	\$1.35	\$0.02
Subtotal	\$187.63	\$0.85	NA	NA	\$54.01	\$0.83
State Agency						
Labor	\$2,436.25	\$10.97	\$318.67	\$1.22	NA	NA
Computer	\$184.90	\$0.83	\$100.00	\$0.38	NA	NA
Other Direct	\$25.00	\$0.11	\$25.00	\$0.10	NA	NA
Subtotal	\$2,646.15	\$11.92	\$443.67	\$1.70	NA	NA
County Office						
Labor	\$213.46	\$0.96	\$271.72	\$1.04	\$70.81	\$1.09
Other Direct	\$25.00	\$0.11	NA	NA	\$21.08	\$0.32
Subtotal	\$238.46	\$1.07	\$271.72	\$1.04	\$91.89	\$1.41
Total	\$3,110.67	\$14.02	\$760.56	\$2.92	\$157.15	\$2.43

* State's pro-rata share based on total number of 524's entered per month nationwide.

** State's pro-rata share based on total number of 524's entered per month in region.

data from States, initiating computer runs at WCC, and consulting with State Agencies and Regional Offices on FNS-524 procedures.

FNS National computer costs include WCC charges for processing of telecommunicated data, merging those data into the DRIPS national file and maintaining the file. This amounts to about a third of the FNS-524 processing cost incurred at the national level.

The cost of printing and distributing FNS-524 forms is estimated at \$.04 per form and represents the only other direct cost identified at the national level. FNS-524 forms are purchased in quantity on an annual basis and thus do not actually occur monthly. Monthly form costs are estimated based on the average monthly number of FNS-524 forms sent to WCC from each State.

Overall FNS National FNS-524 costs only partially depend on the number of FNS-524s submitted to WCC. Variation in this number mainly affects the costs of the forms themselves. Labor costs are relatively independent of FNS-524 quantity, and the cost of computer runs is not strongly affected by the numbers of entries processed. Thus, increases in the quantity of submitted data will increase overall costs but reduce the cost per FNS-524.

Regional Office Cost. State prorated shares of overall monthly Regional Office FNS-524 processing costs are about \$54 in Virginia to \$188 in New York. The two States' unit costs are quite similar, at \$.83 per FNS-524 in Virginia and \$.85 in New York. Because South Carolina sends FNS-524 data directly to FNS, SERO costs for this activity are not applicable to that State.

Labor accounts for the majority of Regional Office FNS-524 costs, averaging 95 percent of related Regional Office cost. Monthly labor costs for data entry preparation activities (form receipt, sorting, bundling, etc.) dominate the overall monthly labor costs at both Regional Offices. Variation of this cost across Regional Offices is largely due to the level of staff assigned to these responsibilities; NERO utilizes more senior level staff for these purposes than MARO. Variation across Regional Office data entry labor costs is largely due to differing staff wages.

Regional Office computer costs in Exhibit 4-1 include only on-site computer time dedicated to FNS-524 data processing. As shown, these costs represent a relatively insignificant percentage of overall monthly cost.

The only identified other direct cost in Regional Office processing of FNS-524 data results from data rejected by the edit checks at WCC. Other direct costs cover the postage charge of mailing rejected data back to State Agencies for resolution.

The unit cost of Regional Office FNS-524 processing seems unlikely to vary much with changes in the quantity of FNS-524 data. As the South Carolina system indicates, however, Regional Office involvement in the FNS-524 data flow can be minimized or bypassed entirely by State use of computer tapes to transmit FNS-524 data.

State Agency Cost. Overall monthly State Agency FNS-524 costs for the three States are presented in Exhibit 4-1 and range from zero in Virginia to more than \$2,600 in New York. Virginia does not incur any State Agency costs in this activity, because county offices send completed FNS-524 forms directly to MARO. Similarly, rejected data flows directly from MARO back to the originating Virginia county office.

New York's monthly labor and computer-related costs are nearly six times greater than those incurred by South Carolina. This results from the different ways in which FNS-524 forms are processed. As mentioned earlier, New York employs a micro-computer system to maintain a database of New York-originated IPV disqualifications. New York further utilizes non-clerical staff to key enter FNS-524 data. Staff then print updated records onto FNS-524 facsimiles and submit the facsimiles to NERO, where they are keypunched a second time. South Carolina State Agency involvement with the FNS-524s is much more limited, consisting mainly of maintaining the SCID-III system update file and a few related activities.

Other New York direct costs principally include postage costs of submitting hardcopy FNS-524 data to the Regional Office. South Carolina submits the data in tape format directly to WCC. Other direct costs are equivalent in the two states because South Carolina utilizes an overnight delivery service for this purpose.

County Office Cost. Overall monthly county office costs range from \$92 (Virginia) to \$272 (South Carolina). Most of the variation stems from the number of FNS-524s submitted. The unit costs range from just over \$1 in South Carolina and New York to about \$1.40 in Virginia.

Labor is the main county office cost in all three States. This is principally the cost of claimswoker time involved in preparing and submitting the FNS-524 data.

County office labor costs to prepare and submit data and resolve rejected data are fairly uniform across the three states, despite substantial differences in the States' procedures. South Carolina caseworkers key enter FNS-524 information directly into that State's update file. FNS-524 information is manually prepared and submitted by Virginia and New York county offices.

Other county office direct costs reflect postage charges incurred in submitting FNS-524 data to the State Agency in New York and directly to MARO from Virginia county offices. South Carolina incurs no other direct costs at the county office level; the cost of submitting data is incurred by the State Agency.

4.3 Report Generation and Distribution Costs

Food Stamp Program regulations require FNS to make DRIPS data available to State Agencies. FNS complies with this requirement by generating a series of monthly and quarterly DRIPS reports. Monthly reports are copies of the entire national file on tape, which FNS typically sends directly to requesting State Agencies. Quarterly reports are typically printed out on paper and formatted according to State specification.

Regional Offices act as intermediaries in the distribution of hardcopy printouts, and sometimes tapes. Regional Offices receive the reports from FNS and distribute them to the State Agencies.

State Agency and local office handling of the reports depends on the State's procedures for caseload matching, applicant matching, and penalty assignment references. State and local costs are therefore presented in the sections dealing with these three activities. The present section considers only FNS National and Regional Office costs.

Exhibit 4-2 presents these cost estimates in terms of overall monthly costs, cost per 100 DRIPS records, and the three States' shares of the monthly cost allocated by DRIPS records.

Exhibit 4-2

Report Generation and Distribution Cost Summary

	Monthly Cost	Cost per 100 DRIPS Records	State Share of Monthly Cost		
			NY	SC	VA
FNS National Cost					
Labor	\$586.81	\$0.31	\$ 19.83*	\$ 29.67*	\$8.06*
Computer					
Tape copy	\$104.39	\$0.06	\$ 3.53	\$ 5.28	\$ 1.43
Hard copy	\$1,514.14	\$0.80	\$ 51.18	\$ 76.56	\$20.80
Other Direct	<u>\$487.96</u>	<u>\$0.26</u>	<u>\$ 16.49</u>	<u>\$ 24.67</u>	<u>\$ 6.70</u>
Subtotal	\$2,693.30	\$1.43	\$ 91.03	\$136.18	\$36.99
NERO Monthly Cost					
Labor	\$180.28	\$1.23	\$ 78.54**	NA	NA
Other Direct	<u>\$10.16</u>	<u>\$0.07</u>	<u>\$ 4.42</u>	<u>NA</u>	<u>NA</u>
Subtotal	\$190.44	\$1.30	\$ 82.96	NA	NA
SERO Monthly Cost					
Labor	\$37.25	\$0.07	NA	NA	NA
Other Direct	<u>\$4.96</u>	<u>\$0.01</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Subtotal	\$42.21	\$0.08	NA	NA	NA
MARO Monthly Cost					
Labor	\$15.00	\$0.06	NA	NA	\$1.61**
Other Direct	<u>\$53.79</u>	<u>\$0.22</u>	<u>NA</u>	<u>NA</u>	<u>\$5.78</u>
Subtotal	\$68.79	\$0.28	NA	NA	\$7.39
Total			<u>\$173.99</u>	<u>\$136.18</u>	<u>\$44.39</u>

* State's pro-rata share based on total number of DRIPS records on national DRIPS file.

** State's pro-rata share based on total number of State DRIPS records relative to total number of Region DRIPS records.

FNS National Cost. FNS National costs of activities conducted to make DRIPS data available to states are estimated to be about \$2,700 per month. Many of the activities itemized in Exhibit 4-2 are conducted only on a quarterly cycle. For those activities, costs are presented as an average over three months.

Unlike labor intensive FNS-524 procedures, computer-related charges for report generation account for the majority of the FNS National costs. The overwhelming share of this cost (93.6 percent) is attributed to hardcopy report generation. The magnitude of this cost largely stems from procedures allowing States to specify the geographic coverage (i.e., national, regional, state, state and contiguous states) and the format (by social security number, by last name, etc.) of the hardcopy reports. The number of print files necessary to accomplish the various report specifications directly contributes to the cost of this task. Currently, 14 states receive data in hardcopy format.

Monthly labor costs of \$587 represent the cost of initiating printout and tape copy procedures and distributing the data to Regional Offices and State Agencies. Most of the remaining non-labor cost is also associated with hardcopy report generation and distribution.

Regional Office Costs. Regional Offices receive the hardcopy (and some tape) reports from FNS and distribute these reports to State Agencies. This is not a very expensive activity, as costs range from \$191 (NERO) to \$42 (SERO). These costs reflect the Regional Office's activity for all States in the region; the share attributed to individual States is proportionately smaller. As with FNS-524 processing activities, South Carolina precludes Regional Office involvement by receiving a monthly tape directly from FNS, and hence has no Regional Office costs attributed for this activity.

The wide range between Regional Office estimated costs is largely due to staff hours in the labor component. All three Regional Offices utilize similar level personnel for these purposes. These tasks require a greater number of monthly hours at NERO than at SERO or MARO.

Other direct costs are mainly for postage. The relatively high cost at MARO is due to the number of hardcopy reports distributed through that Regional Office.

Exhibit 4-3

Caseload Matching Cost Summary

	New York		South Carolina		Virginia	
	<u>Total</u> <u>Cost*</u>	<u>Cost/100</u> <u>References</u>	<u>Total</u> <u>Cost*</u>	<u>Cost/100</u> <u>References</u>	<u>Total</u> <u>Cost</u>	<u>Cost/100</u> <u>References</u>
State Agency Cost						
Labor	\$635.55	\$.04	\$331.67	\$.10	NA	NA
Computer	\$633.99	\$.04	\$133.33	\$.04	NA	NA
Other Direct	<u>\$ 25.00</u>	<u>\$.00</u>	<u>\$25.00</u>	<u>\$.01</u>	<u>NA</u>	<u>NA</u>
Subtotal	\$1,294.54	\$.08	\$490.00	\$.15	NA	NA
County Office Cost						
Labor	\$575.49	\$.03	\$449.77	\$.13	NA	NA
	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Total	\$1,870.03	\$.11	\$939.77	\$.28	NA	NA

*Cost for one comparison of the DRIPS' file to the State master file.

4.5 Applicant Matching Costs

The second optional use of the system is to match DRIPS data with household information on people applying for benefits. This activity can be conducted either manually, through caseworker reference of hardcopy DRIPS reports, or as part of an automated case processing system. As with caseload matching, only State Agency and county office personnel are involved in this activity.

State Agency and county office costs to conduct this activity are presented in Exhibit 4-4. Cost data are presented in terms of the State's average cost for a month and the cost of referencing 100 applicants.

Automated matching of DRIPS data is conducted for all South Carolina Food Stamp Program applicants. Virginia uses manual procedures to check a small number of applicants. The percent of applicants referenced combines with differing levels of automation to cause striking cost differences. As shown in Exhibit 4-4, South Carolina incurs nearly six times the monthly cost of Virginia, over \$1,600 compared to about \$276. But because South Carolina references so many more applicants, its cost per 100 references is under \$7, compared to over \$750 for Virginia.

Part of this dramatic differences in unit costs result from the small number of applicants referenced in Virginia. The State Fraud Control Unit Administrator in Virginia receives 124 quarterly printouts of DRIPS records originating in Virginia and contiguous States, and distributes one printout to each of the 124 Virginia counties. This makes up the State Agency labor costs in Virginia, while the other direct costs cover report distribution postage. These costs are essentially fixed, and would not be altered by an increase in the numbers of applicants referenced. If all Virginia applicants were referenced, the State Agency cost per 100 references would be slightly over \$1.

South Carolina's monthly State Agency costs are quite similar to Virginia's despite the difference in procedures. Labor costs include monthly file maintenance and state-level coordination of procedures with county office personnel. Computer costs represent the cost of maintaining on-line availability of the DRIPS national file.

Exhibit 4-4

Applicant Matching Cost Summary

	New York		South Carolina		Virginia	
	<u>Monthly Cost</u>	<u>Cost/100 References</u>	<u>Monthly Cost</u>	<u>Cost/100 References</u>	<u>Monthly Cost</u>	<u>Cost/100 References</u>
State Agency Cost						
Labor	NA	NA	\$382.40	\$1.56	\$124.96	\$357.03
Computer	NA	NA	\$160.00	\$0.65	NA	NA
Other Direct	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>\$112.80</u>	<u>\$322.29</u>
Subtotal	NA	NA	\$542.40	\$2.21	\$237.76	\$679.32
County Office Cost						
Labor	NA	NA	\$1,086.46	\$4.44	\$38.49	\$109.97
	—	—	=====	=====	=====	=====
Total	NA	NA	\$1,628.86	\$6.65	\$276.25	\$789.29

The difference between South Carolina's automated procedures and the manual process in Virginia is most clearly reflected in the county office labor cost component. This component accounts for caseworker time spent referencing the DRIPS system and activities following up on hits (i.e., penalty validation, case processing). The majority of Virginia applicant matching labor is spent actually referencing the printout. In South Carolina, file reference is automatically invoked and involves an insignificant amount of caseworker time. Local office workers take action only when the DRIPS reference produces a potential match, which only occurs once in every 900 cases referenced. Consequently, South Carolina's cost per reference is far less than Virginia's cost.

4.6 Disqualification Penalty Assignment Costs

The only mandatory state-level use of DRIPS is to reference the system prior to assigning a disqualification penalty. An IPV penalty reference can be performed manually, through claimsworker reference of a hardcopy report, or it can be accomplished through an on-line query of the national file in States where the automated capability exists. As with the previous two system applications, IPV penalty assignment references involve only State Agency and county office levels of Food Stamp Program administration.

The costs incurred at State Agency and county office locations to perform this activity are presented in Exhibit 4-5.

South Carolina is the only one of the three study States which systematically references DRIPS data when assigning disqualification penalties. Overall South Carolina monthly costs for this activity are estimated to be slightly over \$900 per month, or about \$350 per 100 references.

The total monthly cost is roughly evenly split between the State Agency and local office. Computer costs are incurred to maintain on-line availability of the DRIPS national file. State Agency labor costs of mainly cover policy consultation with county office personnel, while county office labor costs represent claimsworker reference time during the processing of an IPV case.

Exhibit 4-5

Penalty Assignment Reference Cost Summary

	New York		South Carolina		Virginia	
	<u>Monthly</u>	<u>Cost/100</u>	<u>Monthly</u>	<u>Cost/100</u>	<u>Monthly</u>	<u>Cost/100</u>
	<u>Cost</u>	<u>References</u>	<u>Cost</u>	<u>References</u>	<u>Cost</u>	<u>References</u>
State Agency Cost						
Labor	NA	NA	\$318.67	\$122.10	NA	NA
Computer	NA	NA	\$133.33	\$ 51.08	NA	NA
Other Direct	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>	<u>NA</u>
Subtotal	NA	NA	\$452.00	\$173.18	NA	NA
County Office Cost						
Labor	NA	NA	\$452.86	\$173.51	NA	NA
	==	==	=====	=====	==	==
Total	NA	NA	\$904.86	\$346.69	NA	NA

The \$346 cost per 100 references is much higher than the cost for caseload matching or applicant matching in South Carolina (\$0.28 and \$7, respectively). This results from two factors. First, state-level costs are relatively fixed, but are spread over a much smaller number of references for penalty assignment than for the other applications. Only about 261 IPV cases occur in an average month, compared to more than 24,000 applications and around 335,000 cases covered in a caseload match. Second, the claimsworker must initiate the penalty assignment reference, which takes several minutes for each case referenced. In contrast, caseload matching and applicant matching occur automatically, and no action is needed by the claimsworker or caseworker unless the DRIPS reference produces a hit.

4.7 Indirect Costs

Previous sections of this chapter have addressed the costs directly incurred in the operation of the DRIPS system in the three study States. In order to capture the full cost of the system, an indirect component should be added. Indirect cost components consist of resources which are not directly identified with a specific DRIPS operation but rather are utilized to support overall operation of the Food Stamp Program. Indirect personnel components generally include management, supervisory and other administrative activities. Non-personnel indirect components are commonly referred to as physical overhead, and typically include telephone, supplies, office equipment, rent, and similar cost items.

Indirect cost data were not collected as part of this study, both because States did not normally compute indirect rates (or compute non-comparable rates) and because indirect costs can not be controlled through DRIPS policy. Nonetheless, it is instructive to obtain at least a rough perspective on the amount of cost not counted in the previous estimates. For this purpose, we can apply a set of indirect cost factors developed in another comparable study¹. These indirect cost factors are presented in Exhibit 4-6.

¹William L. Hamilton et al; The Impact of an Electronic Benefit Transfer System in the Food Stamp Program, Cambridge, Mass., Abt Associates Inc., May 1987.

Exhibit 4-6

Indirect Cost Rate Estimates*

FNS-National	10.2%
Regional Office	4.7%
State Agency	6.2%
County Office	22.1%

*All rates are expressed as a percent of direct costs at the specified organizational level.

The County Office indirect cost factor presented in Exhibit 4-6 is computed from cost data provided by the Berks County (Pennsylvania) Assistance Office. State Agency indirect cost is based on Pennsylvania Department of Public Welfare data. Finally, the Mid-Atlantic Regional Office provided the basis for the Regional Office indirect cost factor.

Given these rates, the impact of including indirect costs is relatively small, as shown in Exhibit 4-7. The estimated indirect costs would add about 13 percent to the previously estimated cost in South Carolina, and 8-9 percent in the other two States. The South Carolina figure is highest because that State incurs the highest proportion of cost at the county office level.

Actual indirect cost rates in the three study States doubtless differ from those of Pennsylvania, so the figures presented in Exhibit 4-7 must be taken as illustrative only. To the extent that the Pennsylvania figures are representative, however, they suggest that the direct cost estimates presented earlier understate total costs by around 5-15 percent.

4.8 DRIPS System Design and Development Costs

Previous sections addressed only the on-going operating costs of the DRIPS system. Additional costs were incurred to design and develop the current DRIPS system, and these are considered here.

DRIPS system design activities were mainly performed at the FNS-National and State Agency levels of program administration. FNS was responsible for developing the database and mechanisms by which data flowed into and out of the system. Included in this responsibility was the design of data entry capability through Regional Offices. Once the system was established, State Agencies made independent decisions on how best to accomplish the required uses of the DRIPS system within their jurisdiction. Some States, such as South Carolina, decided to incorporate DRIPS into more general efforts to automate state food stamp operations. Similar events led to Virginia's plans to conduct caseload matches with the DRIPS system: Virginia was expanding the level of automation in the Food Stamp Program, which created the opportunity to incorporate a caseload matching feature. New York's automated use of DRIPS arose independently of the State's general automation efforts, however.

Exhibit 4-7

Total Monthly DRIPS Operating Cost Summary

State	<u>New York</u>	<u>South Carolina</u>	<u>Virginia</u>
FNS National			
FNS-524 Processing	\$ 38.43	\$ 45.18	\$11.25
Report Generation	\$ 91.03	\$136.18	\$36.99
Indirect Cost	<u>\$ 13.21</u>	<u>\$ 18.50</u>	<u>\$ 4.92</u>
Subtotal	\$142.67	\$199.86	\$53.16
Regional Office			
FNS-524 Processing	\$187.63	NA	\$54.01
Report Generation	\$ 82.96	NA	\$ 7.39
Indirect Cost	<u>\$ 12.72</u>	<u>NA</u>	<u>\$ 2.89</u>
Subtotal	\$283.31	NA	\$64.29
State Agency			
FNS-524 Processing	\$2,646.15	\$ 443.67	NA
Caseload Matching	\$ 431.51	\$ 490.00	NA
Applicant Matching	NA	\$ 542.40	\$237.76
Penalty Assignment Reference	NA	\$ 452.00	NA
Indirect Cost	<u>190.82</u>	<u>\$ 119.54</u>	<u>\$ 14.74</u>
Subtotal	\$3,268.48	\$2,047.61	\$252.50
County Office			
FNS-524 Processing	\$ 238.46	\$ 271.72	\$ 91.89
Caseload Matching	\$ 191.83	\$ 449.77	NA
Applicant Matching	NA	\$1,086.46	\$ 38.49
Penalty Assignment Reference	NA	\$ 452.86	NA
Indirect Cost	<u>\$ 95.09</u>	<u>\$ 499.64</u>	<u>\$ 28.81</u>
Subtotal	\$ 525.38	\$2,760.45	\$159.19
Total	<u><u>\$4,219.84</u></u>	<u><u>\$5,007.92</u></u>	<u><u>\$529.14</u></u>

FNS National Cost. Design of the DRIPS system began in 1983 when FNS published rules requiring State Agencies to report recipient disqualification to FNS promptly, and to check the list of disqualified recipients whenever they suspect an applicant may be currently disqualified and whenever they plan to disqualify a recipient.

After considering several options, FNS decided to make use of available processing resources and develop the needed software to drive the system. Although minor programming changes have been made (e.g., allowing edits to accept FNS-524 data with non-standard disqualification penalties), the present DRIPS system functions much as originally designed.

By choosing to make use of existing data processing resources, FNS needed only to develop the software to operate the system. The estimated cost for this activity is presented in Exhibit 4-8. A share of this overall cost is allocated to the three sample States according to the number of DRIPS records from the state relative to the total size of the DRIPS file.

Overall FNS National system development costs of \$7,000 covered the software needed at WCC and the Regional Offices. This estimate includes labor costs only. FNS did not require any additional hardware beyond what was already available either in-house or at WCC.

Some system implementation activities are not accounted for in the estimate in Exhibit 4-8. Specifically, following completion of the system, State Agency and Regional Office personnel had to be trained in how to use the system. No data are available on the cost of this implementation activity.

State Agency Cost. Exhibit 4-8 also presents estimates for the cost of developing applications for the DRIPS system in the three sample States. South Carolina development costs are by far the largest. Development of DRIPS use in that State was performed by in-house senior programmers and required approximately eight person-months. The South Carolina development cost includes only this labor (with fringe benefits). South Carolina developed the DRIPS system as part of a larger move towards food stamp automation. As a result, hardware purchases made during that time are excluded from calculations of South Carolina system development cost.

New York costs of \$3,000 cover the development of software to conduct the quarterly caseload match and the database software needed to

Exhibit 4-8

DRIPS System Development Cost

	Total	State Share of Total Cost		
	<u>Cost</u>	<u>New York</u>	<u>South Carolina</u>	<u>Virginia</u>
FNS National Software	\$7,000.00	\$236.55	\$353.93	\$96.15
State Agency Software		<u>\$3,000.00</u>	<u>\$35,840.00</u>	<u>\$2,000.00</u>
Total		\$3,236.55	\$36,193.93	\$2,096.15

maintain disqualification records on their microcomputer system. Caseload match software was created by in-house senior programmers. New York utilized a commercially available database management system to maintain state disqualification information.

Virginia contracted to expand its Food Stamp Program data processing capabilities. As part of this effort, the contractor was developing a caseload match procedure. Estimated cost for this activity was \$2,000.

4.9 Summary of DRIPS Costs

In summarizing DRIPS costs, it is useful to introduce a new unit of measure. Previous discussion has considered the monthly operating cost for each organizational level (e.g., monthly state-level cost) and the cost per unit of DRIPS activity (e.g., cost per 100 FNS-524s). While these measures provide useful perspectives, we also need a measure that will be comparable across States and across activities.

The measure used here is the cost per 1,000 casemonths. It is constructed by dividing the monthly operating cost for a jurisdiction by the monthly caseload (in thousands). Alternatively, the cost per 1,000 casemonths could be estimated by multiplying the average cost of performing a DRIPS activity once by the percentage of the caseload (in thousands) for which it is performed each month.

As shown in Exhibit 4-9, direct costs range from less than \$1 to over \$5 per 1,000 casemonths for the mandatory DRIPS activities (submitting FNS-524s, making the DRIPS data available, and conducting penalty assignment references). The apparent variation across States is somewhat exaggerated by the fact that only South Carolina routinely references DRIPS for penalty assignment. If South Carolina's penalty assignment cost were added to the other two States, the range would be narrower, from about \$3 to \$5 per 1,000 casemonths.

The direct cost of the optional activities is less than \$1 per 1,000 casemonths in New York and Virginia, compared to nearly \$8 in South Carolina. Again differences in the intensity with which the States use DRIPS causes much of the overall variation, as only South Carolina performs both optional activities at the maximum possible level.

Exhibit 4-9

DRIPS Costs Per 1,000 Casemonths

	<u>New York</u>	<u>South Carolina</u>	<u>Virginia</u>
Direct Operating Costs			
Mandatory Activities			
FNS-524 Processing	\$1.10	\$2.25	\$0.46
File Maintenance & Data Distribution	0.10	0.40	0.13
Penalty Assignment References	<u>--</u>	<u>2.68</u>	<u>--</u>
Subtotal	1.91	5.33	0.59
Optional Activities			
Applicant Matching	--	4.83	0.81
Caseload Matching	<u>0.36</u>	<u>2.79</u>	<u>--</u>
Subtotal	0.36	7.62	0.81
Total Direct Operating Cost	2.27	12.95	1.40
Indirect Cost	0.18	1.89	0.15
Development Cost	<u>0.04</u>	<u>2.02</u>	<u>0.01</u>
Total	\$2.49	\$16.86	\$1.56

Total direct costs, then, range from \$1.40 per 1,000 casemonths in Virginia to \$12.95 in South Carolina. When indirect costs and development cost are added, the total for Virginia is still less than \$2 per 1,000 case-months, while it climbs to nearly \$17 in South Carolina.

As indicated above, these very large differences are principally caused by differences in the States' approach to DRIPS. One would expect that States using DRIPS more intensively would have not only higher costs, but also greater benefits. The next chapter examines DRIPS benefits to see under what circumstances DRIPS can be cost-beneficial.

CHAPTER 5

DRIPS BENEFITS

The cost of the DRIPS system, presented in the preceding chapter, must be compared to its benefit. The system is designed to help enforce the disqualification penalties associated with Intentional Program Violations. In particular, it is intended to avoid the possibility that the penalties will not be enforced because local food stamp offices are unaware of disqualified individuals' status.

This chapter therefore examines DRIPS benefits, estimating dollar values associated with caseload matching, applicant matching, and penalty assignment references in the three study States. The value of the benefits is then compared with the costs shown earlier to obtain a perspective on the cost-effectiveness of the DRIPS system.

5.1 Methodology for Estimating DRIPS Benefits

The fundamental benefit of the DRIPS system is the avoidance of unwarranted food stamp issuances. To measure the benefits of the system, then, it is necessary to estimate the value of the food stamps that would have been issued without DRIPS, but are withheld because of the system.

Avoided issuances result from each of the major DRIPS activities of caseload matching, applicant matching, and penalty assignment references. The benefits of each activity can be seen as the product of three factors: the number of instances in which DRIPS leads to withheld issuances; the number of months of food stamps not issued; and the average food stamp allotment during the withheld months. None of these factors can be measured precisely with currently available data. Estimating DRIPS benefits therefore requires a number of assumptions, which are discussed below.

Instances of issuances avoided because of DRIPS. No routine reporting system captures comprehensive data on the results of DRIPS applications. The interviews conducted for this study asked State personnel how frequently they used DRIPS for caseload and applicant matching, and what percentage of these applications resulted in a valid "hit". For IPV penalty

assignment, an assumption about the valid hit rate was derived from the distribution of penalties existing on the DRIPS file.¹

The valid hit rate for each DRIPS activity is shown in Exhibit 5-1 for those study States conducting the activity.

New York identifies roughly twice as many disqualified participants through caseload matching as are identified through this activity in South Carolina. Two factors contribute to the greater level of caseload match effectiveness in New York. First, caseload matching can only detect disqualified individuals only after they first become food stamp participants. South Carolina prevents many from getting this far by matching all program applicants with DRIPS data. (The magnitude of the South Carolina valid hit rate for caseload matching suggests that applicant matching is less than foolproof, however.) Secondly, New York conducts caseload matching on a quarterly basis while South Carolina performs this activity monthly. The probability of a valid hit increases with the length of time between caseload matches, as more disqualified individuals are able to become food stamp participants.

Virginia's hit rate for applicant matching is somewhat higher than South Carolina's, although the two are roughly comparable. Virginia uses a selective policy in applicant matching, referencing DRIPS only in a very small proportion of all initial certifications. In contrast, South Carolina automatically checks all applicants against the DRIPS file. The higher hit rate in Virginia suggests that the selective policy does tend to focus on applicants who are more likely than average to have a prior violation.

The hit rates for the various DRIPS applications follow the order that would be expected. Caseload matching should produce the lowest hit rate, because most cases currently receiving benefits would already have been screened in an applicant match or a previous caseload match. IPV penalty assignment references should have the highest hit rate, because these individuals have by definition shown a proclivity to violate program rules.

¹For the analysis, we assume that the results of DRIPS referencing will yield a pattern of penalty assignments equivalent to that currently on the file. Thus, if 98 percent of cases currently on the file represent first offenses, which means that they had no prior DRIPS record, we assume that 98 percent of all penalty assignment references do not yield a valid hit.

Exhibit 5-1

Valid Hit Rates¹ for DRIPS Activities

	<u>New York</u>	<u>South Carolina</u>	<u>Virginia</u>
Caseload Matching	.006	.003	NA
Applicant Matching	NA	.11	.24
Penalty Assignment References	NA	2.0	NA

¹Instances in which the DRIPS reference reveals applicable disqualification information, per 100 cases checked.

Thus, although most of the estimated hit rates are not based on actual counts, their overall pattern appears credible.

Number of months of issuances avoided. No records are maintained on the actual number of months of food stamps not issued to individuals because of IPV disqualifications. We therefore estimate this factor by a priori assumptions about the consequences of the varying penalty lengths.

An individual receives a 6-month disqualification for the first IPV, a 12-month disqualification for the second, and permanent disqualification for the third. Thus the potential number of months of avoided issuances is either 6, 12, or indeterminate (for permanent disqualifications).

Although a 6-month penalty implies a potential effect of 6 months, the actual effect depends on the individual's participation pattern. Assume, for example, that a penalty would begin in the first month of an individual's spell of food stamp receipt. If, in the absence of the penalty, the individual would have received benefits for 6 months, the effect of the disqualification is to avoid 6 months of issuances. But if the individual would have participated for only two months, and then left the program, the real effect of the penalty is only two months' issuances. For this analysis, we assume all participation spells would last 18 months, the average length for a food stamp participation spell.¹ Thus, for penalties beginning at the start of the spell, a 6-month penalty avoids 6 months of issuances, a 12-month penalty avoids 12 months, and a permanent disqualification avoids 18 months.

Individuals with a pending disqualification that is identified in an applicant match meet this description. Their penalty will take effect in the first month of a spell, so the actual effect is assumed equivalent to the potential effect.

For individuals with a pending disqualification that is identified in a caseload match, the DRIPS effect depends on how long the spell has been going on before the caseload match occurs. This is mainly a matter of how frequently the caseload match is performed. In a State with monthly caseload matches, like South Carolina, the individual should normally have received only one month's food stamps before being identified (assuming that lags in

¹Nancy Burstein, Short-Run Dynamics of Food Stamp Receipt: Descriptive Analysis. Cambridge, Mass.: Abt Associates Inc., July 1987.

posting DRIPS data allow one month of participation). In New York, with quarterly caseload matching, the individual might have received one, two, or three months' food stamps. In both States, then, the 6 and 12-month penalties will have their full potential effect. The effect of the permanent penalties will be reduced by the number of months of food stamps already received; the actual effect is therefore assumed to be 17 months in South Carolina and 16 in New York.

For an individual with an active disqualification, the actual effect of a DRIPS match depends on how much of the penalty has been served. Suppose.

for example, that a recipient is found to have committed an IPV, and is assigned a 6-month penalty. The individual would otherwise be eligible to continue receiving food stamps, and hence immediately begins serving an active disqualification penalty. Four months later, the individual reapplies for food stamps and would be approved except that the DRIPS applicant match reveals the disqualification. The application is denied, and food stamp issuances are avoided for the remaining two months of the penalty. Lacking any direct information, we assume that the length of time already served is evenly distributed -- that is, that people are equally likely to have served one month or five months of their penalty at the time of the DRIPS match. Thus the average 6-month penalty is assumed to have 3 months remaining, for an actual effect of 3 months. Similarly, the 12-month penalty is assumed to have an actual effect of 6 months. The permanent disqualification is unaffected by the amount of time already served, and has an actual effect equal to the remaining length of the spell, which assumed to be 18 months for an applicant match, and 17 months for a caseload match in South Carolina.¹

In addition to applicant and caseload matches, DRIPS may be used in assigning penalties following the determination of an IPV. In this instance, the effect depends on how much is added to the individual's penalty. We assume that, in the absence of DRIPS, all IPV's would be treated as first offenses and assigned 6-month disqualifications. If DRIPS is referenced for a case but reveals no prior IPV, DRIPS has no effect and the penalty remains 6

¹New York considers only pending disqualifications in its caseload match. If New York included active disqualifications, the quarterly matching schedule would mean that the permanent disqualification effect would be 16 months.

months. The penalty becomes 12 months if DRIPS reveals one prior disqualification, so the DRIPS check has a potential effect of 6 months. If DRIPS shows two or more prior disqualifications, the penalty is permanent disqualification. Hence the potential effect of the DRIPS hit is the difference between a 6-month disqualification and a permanent one; since we have assumed the potential effect of permanent disqualification to be 18 months, the potential effect of the DRIPS reference in this instance is 12 months.

The effect of a DRIPS penalty assignment reference is immediate if the individual receives an active disqualification and immediately begins serving the penalty. The actual magnitude of the effect in this instance depends on how many more months the individual would have participated before leaving the Food Stamp Program --i.e., how many months remain in the spell. For this analysis, we assume that the IPV is equally likely to occur at any point in the spell. The average instance would occur with the spell half completed, and 9 of the 18 months remaining. A recipient who is assigned the minimum 6 month disqualification penalty during the ninth month of participation would only return to participate for the final three months of a participation spell. Since the potential effect of the DRIPS check exceeds three months for all prior offenses, the effective penalty assumes this value in all cases.

If the IPV penalty assigned is pending rather than active, the DRIPS effect is indirect. Food stamp issuance will be avoided only if a subsequent applicant match or caseload match identifies the individual whose penalty was increased because of the DRIPS reference. This effect is already incorporated in the caseload and applicant matching effects described above. For this analysis, then, penalty assignment references are assumed to have zero effect for pending disqualifications.

The effective penalty lengths following detection by the three DRIPS applications are summarized in Exhibit 5-2.

As the foregoing discussion indicates, the number of months of issuances avoided by a reference depends in part on the status of the disqualification (active or pending) and the length of the disqualification. No direct information is available on the status or length of the disqualifications involved in the DRIPS hits. We therefore assume that the hits reflect the proportional distribution of records currently on the national DRIPS file

Exhibit 5-2

Assumed Months of Issuances Avoided
Following DRIPS Detection

	New York		South Carolina		Virginia	
	<u>Pending</u>	<u>Active</u>	<u>Pending</u>	<u>Active</u>	<u>Pending</u>	<u>Active</u>
Caseload Matching						
First Offense	6	NA	6	3	NA	NA
Second Offense	12	NA	12	6	NA	NA
Third Offense	16	NA	17	17	NA	NA
Applicant Matching						
First Offense	NA	NA	6	3	6	3
Second Offense	NA	NA	12	6	12	6
Third Offense	NA	NA	18	18	18	18
Penalty Assignment						
No Prior Offense	NA	NA	0	0	NA	NA
First Offense	NA	NA	0	3	NA	NA
Second Offense	NA	NA	0	3	NA	NA
Third Offense	NA	NA	0	3	NA	NA

which originate from the three study States. The overwhelmingly majority (97-99 percent) of these records concern 6-month penalties. The distribution of New York, South Carolina and Virginia records in the National file is shown in Exhibit 5-3.

Applying the assumptions described above, Exhibit 5-4 indicates the estimated number of months of issuances avoided by a valid hit for each type of DRIPS reference. The estimated number of issuance months avoided varies by DRIPS activity and by State conducting the activity. New York caseload matching avoids the greatest number of issuance months following a valid hit (6), because only pending penalties are matched. Penalty assignment referrals avoid the fewest issuance months of the three DRIPS applications. It must be recalled, however, that this estimate incorporates only the immediate effect on cases assigned an active penalty; an indirect effect also occurs through caseload and applicant match activities.

Value of issuances avoided. The value of issuances avoided depends on the amount of the monthly food stamp allotment that is withheld because of DRIPS. The allotment amount is determined mainly by the disqualified individual's income and certain expenditures, although it may be affected by the income and expenditures of other household members.

No direct information is available on the allotment amounts or pertinent characteristics of people receiving IPV disqualifications, nor on the subset of people identified in DRIPS hits. Accordingly, we assume that the monthly issuance is the same as the State's average per-recipient monthly issuances in Fiscal Year 1986. This amounts to \$45.24 in New York, \$44.15 in South Carolina, and \$43.19 in Virginia.

5.2 Benefits of DRIPS Activities

Applying the information described above, Exhibit 5-5 presents the estimated benefit per 100 cases matched through each DRIPS activity. In general, the estimated value of the benefits follows the pattern of the valid hit rate. Because the allotment amount and length of the DRIPS effect vary little, the wide variation in valid hit rates largely determines the relative ranking of benefits by State and activity.

Exhibit 5-3

Distribution of Penalty Status and Length for
Penalties Originating in the Three Study States

State	New York			South Carolina			Virginia		
<u>Penalty Length</u>	<u>Pending</u>	<u>Active</u>	<u>Total</u>	<u>Pending</u>	<u>Active</u>	<u>Total</u>	<u>Pending</u>	<u>Active</u>	<u>Total</u>
6 months	99.6	99.6	99.6	96.7	96.8	96.8	98.0	97.4	97.7
12 months	0.4	0.4	0.4	3.0	3.0	3.0	1.6	2.1	1.9
Permanent	0.0	0.0	0.0	0.3	0.2	0.2	0.4	0.5	0.4
(number of cases)	(2570)	(5352)	(7922)	(3713)	(6209)	(9922)	(1355)	(1355)	(2710)

Exhibit 5-4

Estimated Number of Months of Issuances
Avoided Per Valid DRIPS Hit

	<u>New York</u>	<u>South Carolina</u>	<u>Virginia</u>
Caseload Matching			
Pending	6.0	6.2	NA
Active	NA	3.1	NA
Weighted Average	6.0	4.3	NA
Applicant Matching			
Pending	NA	6.2	6.1
Active	NA	3.1	3.1
Weighted Average	NA	4.3	4.6
Penalty Assignment Referral			
Pending	NA	NA	NA
Active	NA	3.0	NA
Weighted Average	NA	3.0	NA

Exhibit 5-5

Estimated Benefits of DRIPS Activities

	<u>New York</u>	<u>South Carolina</u>	<u>Virginia</u>
Caseload Match			
Valid Hit Rate ¹	.006	.003	NA
Months of Issuances Avoided	6.02	4.30	NA
Average Monthly Value	\$45.24	\$44.15	NA
Estimated Benefit Per 100 Cases Referenced	\$ 1.63	\$.57	NA
Applicant Match			
Valid Hit Rate ¹	NA	.110	.238
Months of Issuances Avoided	NA	4.30	4.60
Average Monthly	NA	\$ 44.15	\$43.19
Estimated Benefit Per 100 Cases Referenced	NA	\$ 20.88	\$47.28
Penalty Assignment References			
Valid Hit Rate ¹	NA	2.0	NA
Months of Issuances Avoided	NA	3.0	NA
Average Monthly	NA	\$ 44.15	NA
Estimated Benefit Per 100 Cases Referenced	NA	\$264.90	NA

¹Instances in which the DRIPS reference reveals applicable disqualification information, per 100 cases referenced.

South Carolina's penalty assignment activities generate the highest level of benefits per 100 cases referenced (\$265). Even though the penalty assignment reference avoids fewer month of issuances than the other applications, the high valid hit rate generates large benefits.

Applicant matching activities generate the second greatest benefit level, at about \$47 per 100 cases referenced in Virginia and \$21 in South Carolina. Virginia's greater benefit yield stems from the higher hit rate gained with selective use of applicant matching.

Caseload matching benefits for South Carolina and New York are relatively similar, at about \$0.60 and \$1.60, respectively. The higher benefit level in New York results from both a higher reported hit rate and from the fact that all of these hits involve pending penalties (because New York does not match on active penalties).

Based on these benefit rates, Exhibit 5-6 presents the estimated total monthly benefits generated through DRIPS use in three States. These benefits are computed by applying the unit benefit of a valid hit in each activity to the relevant number of monthly hits.

New York generates a somewhat greater level of monthly DRIPS benefit through caseload matching (\$8,715) than the combined activities of South Carolina. The relatively large New York benefit is in part due to the size of the caseload: although the caseload matching has only an .06 percent valid hit rate, it matches DRIPS data on a caseload of over 1.7 million participants. In addition, a valid hit from the New York caseload match avoids more months of issuance than the other States' DRIPS references, and hence has the largest benefit per valid hit.

South Carolina, with a caseload only one-fifth the size of New York's, generates almost as much monthly benefit. Applicant matching activities account for over 60 percent of the State's monthly DRIPS benefit. The South Carolina figures may reflect an interaction between caseload and applicant matching--i.e., using DRIPS to match applicant information may reduce the likelihood of identifying disqualified participants during caseload matching. As shown in Exhibit 5-6, over two and one-half times more valid hits (and consequently benefits) result from applicant matching than from caseload matching in South Carolina.

Exhibit 5-6

Total Monthly DRIPS Benefits

	<u>New York</u>	<u>South Carolina</u>	<u>Virginia</u>
Caseload Matching			
Monthly Number of Valid Hits	32 ¹	10	NA
Months of Issuances Avoided	6.02	4.30	NA
Average Monthly Benefit Value	\$45.24	\$44.15	NA
Estimate Monthly Benefit	\$8,715.03	\$1,898.45	NA
Applicant Matching			
Monthly Number of Valid Hits	NA	27	0.08
Months of Issuances Avoided	NA	4.3	4.6
Average Monthly Benefit Value	NA	\$44.15	\$43.19
Estimate Monthly Benefit	NA	\$5,125.82	\$15.89
Penalty Assignment Reference			
Monthly Number of Valid Hits	NA	5.2	NA
Months of Issuances Avoided	NA	3.0	NA
Average Monthly Benefit Value	NA	\$44.15	NA
Estimated Monthly Benefit	NA	\$688.74	NA
Total	<u>\$8,715.03</u>	<u>\$7,713.01</u>	<u>\$15.89</u>

¹New York caseload matching valid hits represent a third of the quarterly match results.

It is not clear why South Carolina's combined benefit level comes so close to that achieved by New York, given the disparity in caseload size. Several factors may contribute to this result. First, by considering only pending disqualifications, New York may be missing some disqualified individuals on its current caseload. Active penalty records account for over 50 percent of the National DRIPS file. Similarly, by not using DRIPS for penalty assignment references, New York misses some potential benefits not captured through caseload matching. Another possibility is that the DRIPS data file is less complete for New York than South Carolina, which could happen if some counties are not rigorous in filing FNS-524s (in fact, fewer FNS-524s are filed in an average month in New York than in South Carolina). Finally, it is possible that disqualified individuals are more likely to reapply for food stamp benefits in South Carolina than in New York. In the absence of direct data, however, the validity and relative importance of these explanations cannot be fully analyzed.

DRIPS benefits in Virginia are negligible, at an estimated \$16 per month. This results from State's very limited DRIPS activity--the system is used only for applicant matching, and then only for a very small fraction of all applicants. Although Virginia's applicant matches actually yield greater benefits per reference than South Carolina's, South Carolina's universal application of the procedure produces much more total benefit.

It is useful to summarize DRIPS benefits, like costs, in terms of the benefits per 1,000 casemonths. This provides comparability across DRIPS activities and across States, and will be used subsequently to compare benefits and costs for the overall system. The figures are shown in Exhibit 5-7.

The benefits of mandatory penalty assignment, which can be estimated only for South Carolina, amount to about \$2 per 1,000 casemonths. The optional DRIPS activities have substantially greater benefits in both New York and South Carolina, at about \$5 and \$21 per 1,000 casemonths, respectively. The very limited DRIPS use in Virginia again results in an extremely low benefit estimate, about five cents per 1,000 casemonths.

5.3 Comparing DRIPS Benefits and Costs

Drawing on cost levels estimated in Chapter 3, Exhibit 5-8 presents DRIPS benefits and costs per 100 cases referenced in the three study States. Only costs directly related to the three benefit generating activities are

Exhibit 5-7

DRIPS Benefits Per 1,000 Casemonths

	<u>New York</u>	<u>South Carolina</u>	<u>Virginia</u>
Mandatory Activities			
Penalty Assignment	--	\$2.04	--
Optional Activities			
Applicant Matching	--	15.19	\$0.05
Caseload Matching	<u>\$5.06</u>	<u>5.63</u>	<u>--</u>
Subtotal	5.06	20.82	0.05
Total Benefits	\$5.06	\$22.86	\$0.05

Exhibit 5-8

DRIPS Benefits and Costs

	<u>New York</u>	<u>South Carolina</u>	<u>Virginia</u>
Cost per 100 Cases Referenced			
Caseload Matching	\$.11	\$.28	NA
Applicant Matching	NA	\$6.65	\$789.29
Penalty Assignment References	NA	\$346.69	NA
Benefit per 100 Cases Referenced			
Caseload Matching	\$1.63	\$.57	NA
Applicant Matching	NA	\$20.88	\$47.28
Penalty Assignment References	NA	\$264.90	NA

included in this exhibit. The costs of entering FNS-524s and distributing data, indirect costs, and development costs will be considered later.

Comparing just the marginal cost of implementing the various DRIPS references to the benefits they generate, the exhibit shows some instances in which DRIPS activities are cost effective and some instances in which they are not. The benefits clearly exceed the costs for caseload matching in New York and South Carolina and for applicant matching in South Carolina. In Virginia, the costs of limited applicant matching far outweigh the estimated benefits.

The picture for penalty assignment references in South Carolina is not clear from the exhibit. The direct comparison shows costs exceeding benefits, but it must be remembered that the benefit estimate only includes the immediate effect of the reference on active disqualifications. Penalty assignment references also have an indirect effect through caseload and applicant matches. In fact, analysis suggests that the indirect benefit is large enough for total penalty assignment benefits in South Carolina to exceed the cost.¹ Note, however, that the indirect benefit only exists if the applicant matching and caseload matching activities are carried out. Hence it is appropriate to make the cost-benefit comparison in terms of direct benefits only.

The exhibit provides no definitive evidence on the question of which DRIPS activities are most cost-effective. In South Carolina, the only State to conduct all three DRIPS activities, applicant matching has the most favorable benefit/cost ratio, at about 3/1. In New York, however, the ratio for caseload matching is an even more favorable 15/1. It is clear from previous discussions that both the costs and the benefits of a particular DRIPS activity are influenced by factors such as caseload size, the frequency of DRIPS

¹To approximate the indirect benefit, we assumed that no case in South Carolina would receive more than a 6-month penalty without the DRIPS reference. This implies that all hits in caseload and applicant matching would have a maximum potential effect of avoiding 6 months of food stamp issuance. The benefits of caseload and applicant matching were recalculated with this assumption to estimate the portion of benefits attributed to those activities which actually depend on previous performance of the penalty assignment reference. The indirect benefit of penalty assignment references is estimated at about \$125 per 100 references. This brings the total penalty assignment benefit to \$390, compared to the \$347 cost. Re-attributing this indirect benefit reduces the estimated benefits for caseload and applicant matching, but in both cases the benefit remains greater than the cost.

references, and which other DRIPS activities are performed. Hence it appears that no general conclusions are possible about the relative effectiveness of the three DRIPS activities.

To obtain a perspective on the overall cost-effectiveness of States' DRIPS efforts, it is necessary to combine the costs and benefits for the individual activities and to include those costs not counted in the above comparisons. Exhibit 5-9 presents these data. To prevent cross-state comparisons from being distorted by the State's caseload size, the exhibit presents costs and benefits per 1,000 casemonths.

Combining all costs and benefits, DRIPS benefits exceed its costs in two of three States. Net benefits are \$6 per 1,000 case months in South Carolina, and about \$2.60 in New York. In contrast, Virginia's DRIPS costs exceed the benefits by about \$1.51 per 1,000 case months.

The intensity with which the States use the DRIPS system clearly plays a major role in determining its net benefits. The key factor in South Carolina's relatively high net benefit is that State's intensive use of DRIPS: costs are comparatively high in every category, but so are benefits. New York, in contrast, has a relatively high ratio of benefits to costs, but does not use the system enough to generate the same level of net benefit as South Carolina. And Virginia's very limited use of the system means that even its relatively small costs far exceed the benefits.

It is important in interpreting these analytic results to recall the uncertainty that surrounds many of the estimates presented here. Nearly all of the cost figures and some of the key benefit figures come from professional estimates rather than "hard" data, and are subject to some measurement error. Probably more important are the assumptions that had to be made in estimating benefits, particularly the assumptions concerning the number of months of benefits avoided by a valid hit. If the assumptions are too generous by a factor of two--that is, if a valid DRIPS hit would only avoid half as many issuances as we assumed--costs would exceed benefits in South Carolina and nearly equal them in New York. It is therefore particularly important for future analysis to test the validity of these assumptions.

Bearing this caveat in mind, the cost and benefit estimates nonetheless provide an interesting and potentially important perspective on DRIPS.

Exhibit 5-9

DRIPS Benefit and Cost per 1,000 Casemonths

	<u>New York</u>	<u>South Carolina</u>	<u>Virginia</u>
Mandatory Activities ^a			
Direct Cost	\$1.91	\$5.33	\$0.59
Benefit	--	<u>\$2.04</u>	<u>--</u>
Net Benefit	(1.91)	(3.29)	(0.59)
Optional Activities ^b			
Direct Cost	0.36	7.62	0.81
Benefit	5.06	20.82	0.05
Net Benefit	4.70	13.20	(0.76)
Subtotal Net Benefit	2.79	9.91	(1.35)
Indirect and Development ^c Costs	0.22	3.91	0.16
Total Net Benefit	\$2.57	\$6.00	(\$1.51)

^aProcessing FNS-524s, file maintenance and data distribution, and penalty assignment references.

^bApplicant matching and caseload matching.

^cDevelopment cost estimated as the monthly State and Federal cost to amortize total expense at 5 percent interest over 60 months.

The figures suggest that DRIPS is not likely to yield positive net benefits if DRIPS use is limited to the mandatory activities. (In South Carolina, the only State for which costs and benefits can be estimated for all mandatory activities, the costs are more than twice as great as the benefits.) However, the analysis also indicates that DRIPS can yield positive net benefits when States routinely carry out some or all of the optional DRIPS activities. Thus net benefits are positive in both New York and South Carolina. Only Virginia, with minimal DRIPS usage, shows negative net benefits when all activities are combined.

It is impossible to judge from the three study States whether or not DRIPS benefits exceed its costs nationwide. The three States were chosen because of anecdotal information indicating that South Carolina and New York were relatively intensive DRIPS users and that Virginia used the system much less. To extrapolate from these results to a national pattern would require knowing how many States are like New York and South Carolina, how many are like Virginia, and how many have important features unrepresented by any of the three study States. FNS can probably obtain this kind of information only through a more extensive evaluation effort; the necessary elements of such an effort are described in Chapter 7.

Finally, it is important to note that the research reported here was conducted before passage of the Computer Matching and Privacy Protection Act of 1988. That Act has several important implications for DRIPS. For example, it would require USDA to enter explicit computer matching agreements concerning the use of DRIPS data. USDA would have to establish a Data Integrity Board to oversee and approve these agreements. Changes in some DRIPS procedures might be required, such as additional verification of DRIPS data before benefits could be denied to an individual.

Conforming to the Act's requirements would almost certainly make DRIPS more costly. DRIPS benefits would probably not be affected very much, but constraining the system in order to protect individual rights could cause some fractional reduction in the amount of issuances avoided. Thus while the extent of the Act's effect can not be estimated, it will tend to reduce DRIPS' net benefits below the level existing at the time the data were collected.

CHAPTER 6

HYPOTHETICAL ALTERNATIVES TO A NATIONAL DISQUALIFICATION NETWORK

The previous two chapters discussed cost and benefit estimates for the National DRIPS system. Although it was shown that the National system may be cost-effective in certain applications, one of the questions policy makers must address is whether some other approach to disqualification reporting could yield greater net benefits. Some program managers have agreed that most DRIPS "hits" are based on within-State or within-county data. If this is true, perhaps the extra cost of maintaining a national DRIPS database would outweighs the incremental benefit created from detecting disqualified individuals who change program jurisdictions.

This chapter therefore examines the cost-effectiveness of three hypothetical disqualification systems: a minimal county system, an expanded county system and a state-level system. These systems differ in the geographic coverage of the database storing disqualification information and in the ways in which this information is used to prevent participation by individuals who should be serving a disqualification penalty. The central features of the systems are summarized in Exhibit 6-1 and described briefly below.

The minimal county system would rely solely on information stored in client case folders to prevent disqualified applicants from receiving benefits and to assign disqualification penalties. This alternative would least resemble the current DRIPS system, eliminating all components of a systematic disqualification network. The hypothesis tested is that most DRIPS hits do not involve out-of-county information, and since in-county disqualification information is already maintained at the county office level, an acceptable number of detections can be obtained through routine case processing.

The second hypothetical system would supplement the minimal county alternative with a dedicated county-level disqualification database. In the expanded county-level system, claimworkers would establish a record in a central file for each disqualified case and reference the file to determine the proper disqualification penalty to impose. Disqualification information would still be maintained in client case folders, and county office caseworkers would reference these files for reapplicant households. The

disqualification file would be referenced for initial applicants and for new members of reapplicant households. The added features of this system allow the county to retrieve information on individuals who, after a disqualification, re-apply for benefits within the same county but as part of a different case.

The final hypothetical system, a state-level system, would broaden the scope of the disqualification database to state-level coverage. This system functionally resembles the national system, with State Agency personnel assuming the responsibilities currently performed at the Federal and Regional Office program levels. Disqualification information would be reported by county offices to a central database, presumably located at the State's data processing facility. State Agency personnel would maintain the data and make the information available to the county office for purposes of applicant matching and penalty assignment references. A caseload match of disqualified individuals with the State's participation file could also be conducted with the results reported to county office caseworkers for any needed client action. The hypothesis tested by this system is that the incremental benefit of detecting inter-county hits within the State offsets the cost of maintaining state-level coverage of the disqualification network.

A number of key assumptions underly the likely costs and benefits which are estimated for the three hypothetical systems. Section 6.1 discusses these assumptions and presents an overview of the methodology used to develop the estimates.

Section 6.2 focuses on the minimal county-level system. Estimates of likely costs and benefits are presented at a summary level with a discussion and assessment of overall system cost-effectiveness. The next two sections address the same topics, but for the expanded county and state systems. Because these alternatives can be viewed as progressing to a more centralized system, the incremental cost and benefit relative to the previously examined system is presented alongside cost and benefit estimates.

Section 6.5 compares the cost and benefit estimates across all four systems (i.e., the three hypothetical systems and the National DRIPS system) and compares the cost implications of each. Finally, Section 6.6 summarizes the findings of the previous five sections.

6.1 Framework for Analyzing Hypothetical Systems Costs and Benefits

To maintain consistency with the analysis of the DRIPS system presented in Chapters 4 and 5, the hypothetical systems are structured around the previous analysis of New York, South Carolina and Virginia DRIPS operations. That is, by using the data collected for the previous analysis, the hypothetical systems are analyzed as if they operated in the three study States.

Hypothetical System Operating Costs. The logic for estimating costs closely follows the analysis of National DRIPS system costs presented in Chapter 4. Cost data are presented per 1,000 casemonths for each of the activities performed in the system. More detailed estimates of system operating costs are presented in Appendix D, along with the key assumptions used in developing the estimates.

To the extent possible, cost estimates reflect the actual, state-specific costs observed in the DRIPS analysis. Since the three systems examined in this chapter are hypothetical, component costs in each State are estimated by using actual data for the observed activity which most closely resembles the hypothetical activity to be performed. A second approach is used to estimate costs for activities which are not currently conducted in a State. For those activities, data collected from other States are used. For example, the cost to manage a state-level database in Virginia is estimated using data collected from South Carolina and New York, because no such activity was observed in Virginia.

Some component costs are related to the size of the disqualification database and can not be directly estimated without making assumptions about that relationship. For example, performing a caseload match with a database containing only statewide disqualification information is presumably less costly than with the much larger national database. Specific assumptions used to adjust those component costs related to file size are described in Appendix D.

To the extent possible, it is assumed that roughly the same uses will be made of disqualification information in the hypothetical systems as in the current DRIPS system. For example, since South Carolina caseworkers reference the disqualification file for every program applicant, they are

assumed to reference the analogous files in the expanded county and State systems (no disqualification file is maintained in the minimal county system).

Client case folder references were not considered in the DRIPS analysis in Chapters 4 and 5. To estimate the frequency of case folder references for applicant matching, we must make an assumption about the number of program reapplicants. Analysis elsewhere has shown that roughly 25 percent of all approved program applicants are reapplying for benefits.¹ Therefore, since case folders only exist for reapplicants, the analyses assume that caseworkers reference the case folders of 25 percent of all applicants for purposes of applicant matching.

This assumption has one important limitation that should be noted. Although 25 percent of all applicants are reapplying for benefits, a more accurate measure of case folder references would include only reapplicants who previously participated in the same county, because a case folder would not likely be available for reapplicants who previously participated in another county or State. While the assumption undoubtedly overstates the true frequency of case folder references, no other data source is available to provide the more accurate measure.

Hypothetical System Benefit. As with the National DRIPS system, the fundamental benefit of a hypothetical disqualification system is the avoidance of food stamp issuances to disqualified individuals. The benefit of the system is thus the dollar value of food stamps that would have been issued in the system's absence, but are withheld because of the system.

The estimated benefit of the National system was presented in Chapter 5. In that chapter, benefit was defined as the product of the number of instances in which DRIPS lead to withheld issuances; the number of months of food stamps not issued; and the average food stamp allotment during the withheld months.

We estimate the benefits of the hypothetical systems using the same general approach. Because these systems would presumably maintain the same type of information as the national DRIPS system, the estimated number of months of issuances avoided is assumed to be equal for cases detected by all

¹1986 Integrated Quality Control Sample.

three systems. Likewise, the average food stamp allotment is unchanged in the benefit equation for the State and county systems. However, to account for the smaller geographic coverage of disqualification information maintained in a hypothetical system it is necessary to adjust the number of instances in which the system leads to withheld issuances.

Earlier it was mentioned that applicant matching, penalty assignment references and caseload matching are assumed to be performed with the same approximate frequency in the hypothetical systems as in the current DRIPS system. Since the geographic coverage of the hypothetical systems is limited -- i.e., to those penalties committed within the State or the county, depending on the system -- applicant and caseload matching and penalty assignment in the hypothetical systems will only reveal previous disqualifications originating within the geographic range of the database. To estimate hypothetical system benefits, then, we would like to know the proportion of DRIPS hits in which the identified individual remained in the same geographic region where he or she was disqualified. The ideal approach to estimating the lower hit rates would use the distribution of hits in the current system among three categories:

- hits that would have occurred in a county system (i.e., hits in which the worker referencing the system is in the same county where the most recent disqualification occurred);
- hits that would have occurred in a State system (i.e., the reference is made from the same State where the most recent disqualification occurred, but not necessarily the same county); and
- hits that would only have occurred in a national system (i.e., the worker referencing the system is in a different State from the one where the most recent disqualification originated).

No available data source provides this information directly, particularly for applicant matching and caseload matching. No general records are maintained of hits resulting from DRIPS references. A hit may result in an update to the DRIPS file (for example, to change a disqualification status from "pending" to "active"). However the system does not always maintain separate records on these updates, so it is not possible to compare the location of the penalty with the location of the update.

The situation is somewhat more favorable for penalty assignment references. Each disqualification penalty adds a new record to the DRIPS file. A hit should therefore be indicated by the presence of two or more penalty records for the individual. For penalty assignment references, then, we can estimate the hit rates for hypothetical systems by using the following data from the national file:

- a) the total number of pairs of penalty records, where a pair is either a first and second penalty or a second and third penalty for an individual;
- b) the number of pairs in which both disqualifications are recorded as occurring in the same county; and
- c) the number of pairs in which both disqualifications are recorded as occurring in the same State, regardless of the county.

Using this information, we can estimate the proportion of penalty assignment hits that would be captured by a county system (b/a), the proportion that would be captured by a State system (c/a), and the proportion that would only be captured by a national system $[(a-b-c)/a]$.

Based on information from the National DRIPS file, Exhibit 6-2 presents the distribution of penalty pairs in which one or more of the records originate from the same county, a different county but the same State, and different States. To display the wide range of DRIPS activity, data from all 50 States and the District of Columbia are presented, sorted by the number of cross-state penalty pairs. (To avoid double counting, cross-state penalty pairs were assigned to the State with the later penalty date.)

It should be noted that these estimates are still subject to some imprecision. An update to the DRIPS file does not always leave a separate record, so we can not be certain that the county shown in the penalty record is the county where the disqualification occurred. This means that some individuals may have changed counties between disqualifications, even though their records will indicate two disqualifications in the same county, because the first disqualification record was updated. Conversely, if an individual has two disqualifications in the same location and an intermediate update somewhere else, the records could indicate that the disqualifications occurred in different places.

Exhibit 6-2

Distribution of Within State and Within County Penalty Pairs

State	Number of Pairs.	Different State	Pcnt	Within State	Pcnt	Within County	Pcnt
Delaware	0	0	NA	0	NA	0	NA
Vermont	0	0	NA	0	NA	0	NA
Wisconsin	0	0	NA	0	NA	0	NA
Iowa	16	0	0.0%	1	6.3%	15	93.8%
North Carolina	27	0	0.0%	12	44.4%	15	55.6%
Oklahoma	11	0	0.0%	1	9.1%	10	90.9%
Maryland	16	0	0.0%	1	6.3%	15	93.8%
Wyoming	6	0	0.0%	3	50.0%	3	50.0%
Maine	19	0	0.0%	0	0.0%	19	100.0%
Nebraska	5	0	0.0%	0	0.0%	5	100.0%
New Mexico	25	0	0.0%	5	20.0%	20	80.0%
Alaska	4	0	0.0%	0	0.0%	4	100.0%
Montana	14	0	0.0%	6	42.9%	8	57.1%
Minnesota	1	0	0.0%	1	100.0%	0	0.0%
North Dakota	20	0	0.0%	20	100.0%	0	0.0%
New Hampshire	13	0	0.0%	1	7.7%	12	92.3%
West Virginia	26	0	0.0%	0	0.0%	26	100.0%
DC	1	0	0.0%	1	100.0%	0	0.0%
New Jersey	976	2	0.2%	1	0.1%	973	99.7%
Washington	389	1	0.3%	0	0.0%	388	99.7%
Tennessee	286	1	0.3%	1	0.3%	284	99.3%
Florida	161	1	0.6%	1	0.6%	159	98.8%
California	276	2	0.7%	4	1.4%	270	97.8%
South Carolina	396	3	0.8%	1	0.3%	392	99.0%
Massachusetts	118	1	0.8%	1	0.8%	116	98.3%
Arkansas	101	1	1.0%	1	1.0%	99	98.0%
Louisiana	97	1	1.0%	0	0.0%	96	99.0%
Alabama	280	4	1.4%	7	2.5%	269	96.1%
Arizona	58	1	1.7%	2	3.4%	55	94.8%
Connecticut	57	1	1.8%	2	3.5%	54	94.7%
Texas	368	7	1.9%	2	0.5%	359	97.6%
Virginia	50	1	2.0%	5	10.0%	44	88.0%
Kansas	42	1	2.4%	4	9.5%	37	88.1%
Missouri	408	10	2.5%	4	1.0%	394	96.6%
Kentucky	34	1	2.9%	3	8.8%	30	88.2%
Indiana	93	3	3.2%	1	1.1%	89	95.7%
Rhode Island	57	2	3.5%	21	36.8%	34	59.6%
Pennsylvania	108	4	3.7%	5	4.6%	99	91.7%
South Dakota	27	1	3.7%	25	92.6%	1	3.7%
Oregon	27	1	3.7%	10	37.0%	16	59.3%
Mississippi	320	13	4.1%	3	0.9%	304	95.0%
Colorado	91	4	4.4%	4	4.4%	83	91.2%
Michigan	115	6	5.2%	6	5.2%	103	89.6%
Nevada	146	8	5.5%	1	0.7%	137	93.8%
Utah	32	2	6.3%	15	46.9%	15	46.9%
Idaho	47	3	6.4%	29	61.7%	15	31.9%
Georgia	158	11	7.0%	38	24.1%	109	69.0%
New York	141	12	8.5%	13	9.2%	116	82.3%
Hawaii	81	10	12.3%	28	34.6%	43	53.1%
Ohio	59	8	13.6%	22	37.3%	29	49.2%
Illinois	64	9	14.1%	16	25.0%	39	60.9%
Total	5867	136	2.3%	328	5.6%	5403	92.1%

A second type of imprecision results from the variation in DRIPS-related procedures employed by States. Some States aggressively utilize DRIPS to prevent disqualified individuals from receiving benefits, while others apparently make little or no use of the system. This imprecision is implied in the wide variation of within-county, within-state and cross-state penalty pairs in Exhibit 6-2. Some States, such as New Jersey, have a large number of penalty pairs, almost none of which cross county borders. Other States (e.g., Illinois) have few penalty pairs, but a significant percentage of them cross State boundaries. In short, it seems that varying procedures employed by States either in using DRIPS or in processing records into the DRIPS system may yield a distorted picture of cross-border mobility.

Because we do not know which States' figures are "real" and which ones result from operating idiosyncracies, the benefit estimates are based on a central measure of the distribution. The measure chosen was the median of the non-zero values. From Exhibit 6-2, these median values indicate:

- 3.7 percent of penalty pairs involve two or more States;
- 5.2 percent of penalty pairs involve two counties within a given State; and
- the remaining 91.1 percent of penalty pairs, involve only a single county.

When applied to the DRIPS valid hit rates (as estimated in Chapter 5), these figures yield estimates of the number of previous disqualifications that would be detected through penalty assignment references conducted in each of the hypothetical systems.

These ratios are also be applied to the hit rates for applicant matches and caseload matches. This procedure makes the necessary assumption that people identified in applicant and caseload matches, most of whom have one offense, follow the same pattern of geographic mobility as people being assigned their second or third penalty. Although it would be preferable not to make this assumption, no data exist for an empirical estimate.

Applying the information described above, Exhibit 6-3 presents estimates of the valid hit rates for the activities of each hypothetical disqualification systems. The assumptions underlying the estimated hit rates are as follows:

Exhibit 6-3

**Valid Hit Rates* for Disqualification Activities
in Hypothetical Systems**

	<u>NY</u>	<u>SC</u>	<u>VA</u>
<u>Minimal County System</u>			
Applicant Matching			
Case Folder Reference	0.1013	0.1013	0.1013
Penalty Assignment Reference			
Case Folder Reference	1.43027	1.43027	1.43027
<u>Expanded County System</u>			
Applicant Matching			
Disq. File Reference	NA	0.1013	0.2186
Case Folder Reference	0.1013	NA	0.1013
Penalty Assignment Reference			
Disq. File Reference	NA	0.2095	NA
Case Folder Reference	1.43027	1.43027	1.43027
<u>State System</u>			
Caseload Matching	0.0053	0.0029	NA
Applicant Matching			
Disq. File Reference	NA	0.1071	0.2311
Case Folder Reference	0.1013	NA	0.1013
Penalty Assignment Reference			
Disq. File Reference	NA	1.9260	NA
Case Folder Reference	1.4303	NA	1.4303

*Instances in which the reference reveals applicable disqualification information, per 100 cases referenced.

- Applicant matching through case folder reference -- The South Carolina hit rate for DRIPS applicant matching (the only State observed to perform matching for all applicants) is adjusted to reflect the reduced scope of the match. The median percentage of same-county DRIPS pairs (91.1%) is the basis for adjustment in all systems¹. No hit rate is estimated for case folder references in the South Carolina State and Expanded County systems because it is assumed that all applicants are matched through reference to the disqualification file.
- Applicant matching through disqualification file reference -- For South Carolina and Virginia, the estimated hit rates are based on those reported by the States for DRIPS applicant matches, adjusted for the reduced scope of the matching file.
- Penalty assignment references -- Hit rates for all systems result from adjusting the South Carolina DRIPS penalty assignment hit rate.²
- Caseload matching -- Hit rates reported by New York and South Carolina are adjusted to reflect state-wide rather than national databases. Virginia is assumed to follow current practice and perform no caseload matching.

¹No adjustment to the hit rate is made in the minimal county system to account for individuals who have a previous disqualification in the same county which is not covered in the case folder (e.g., because the individual was in a different case when the violation occurred). To account for this factor, we make the assumption that the percentage of reapplicants who only reapply within the same case equals the percentage of reapplicant households containing the same or fewer members as when the case previously received benefits. Analysis of data compiled for purposes of assessing impacts on the Food Stamp Program from the Omnibus Reconciliation Act of 1981 indicates that 78.5 percent of reapplicant households meet this condition. Therefore, case folder references will only potentially reveal previous disqualifications for 78.5 percent of reapplicants.

²As with applicant matching in the minimal county system, an additional adjustment for penalty assignment references made to client case folders is required. We assume that client case folders will reveal previous disqualifications for 78.5 percent of the cases in which such information exists. Information on the remaining 21.5 percent of the cases is assumed to be revealed only through references to the disqualification file.

6.2 Minimal County-level System Operations

The minimal county system would represent the most significant departure from the current national DRIPS operations among the three hypothetical systems considered in this chapter. No centralized database dedicated to disqualification information would be maintained under this system. All information related to disqualifications would be maintained at the county office in client case folders.

Following establishment of an IPV, the county office claimsworker would reference the client's case folder to determine whether the client had been previously disqualified in the county. The claimsworker would record the new disqualification penalty in the case folder after it is determined.

County office caseworkers are assumed to reference the case folder for all reopening cases. This effort would be the only form of applicant matching in the minimal county system. No caseload matching would be conducted in this system.

The costs and benefits per 1,000 casemonths of conducting these activities are presented in Exhibit 6-4. As shown in that exhibit, applicant matching and penalty assignment activities can be conducted at very low cost through referencing client case folders while still generating positive net benefit in all three States. Estimates of net system benefit per 1,000 case months range from about \$2.80 (New York) to \$4.10 (South Carolina).

The low estimated operating costs result from the assumption that caseworkers reference client casefolders as a part of routine application processing and claimsworkers likewise reference this file when processing a disqualification case. No incremental cost is incurred unless the folder reveals a previous disqualification, in which case follow-up activities must be carried out.

Monthly benefit estimates are largely driven by the frequency with which each activity is conducted (relative to the State's caseload size). Thus, although penalty assignment activities achieve the same valid hit rate in all three States, South Carolina processes a greater number of monthly penalties relative to that State's caseload than are processed in the other two States. Because of this greater relative frequency, the estimated monthly benefit from penalty assignment activities in South Carolina is roughly four times greater than estimated Virginia penalty assignment benefits.

Exhibit 6-4

Costs and Benefits per 1,000 Casemonths for
Minimal County System

	<u>NY</u>	<u>SC</u>	<u>VA</u>
<u>Monthly Operating Cost</u>			
Applicant Matching	\$0.06	\$0.06	\$0.06
Penalty Assignment	<u>0.01</u>	<u>0.04</u>	<u>0.01</u>
Subtotal	0.07	0.10	0.07
 <u>Monthly Benefit</u>			
Applicant Matching	2.60	2.74	2.86
Penalty Assignment	<u>0.25</u>	<u>1.47</u>	<u>0.35</u>
Subtotal	2.85	4.21	3.21
 <u>Net System Benefit (Cost)</u>	 2.78	 4.11	 3.14

6.3 Expanded County-level System Operations

The expanded county system differs from the minimal county system by including a county-level database storing disqualification information. All other features of the minimal county system are included in the expanded county system.

The county-level database would be used for applicant matching and penalty assignment references. However, New York county office personnel do not currently perform either applicant matching or penalty assignment references with DRIPS data. We therefore assume that New York county office personnel would also not reference the county-level disqualification database for those purposes. Given this assumption, it is unreasonable to include a county-level database in the New York expanded county system. Therefore, cost and benefit estimates for the New York expanded county system are identical to that State's minimal county system.

For a program applicant in the other two States, the caseworker would first determine whether the household previously received benefits in the county. If so, the caseworker would initially check the household case folder. This would be the only check for unserved disqualifications if the household contained no new members from when it previously received benefits. The caseworker would check the disqualification file for reapplicant household members not previously in the case. The same approach would also be used for penalty assignment.

No caseload matching would be performed in the expanded county system. Although the disqualification file could theoretically be maintained on an automated system, it is assumed that the level of automation necessary to conduct caseload matching efficiently exceeds the capability commonly found in county offices.

The States' applicant matching procedures are assumed to vary, reflecting differences in their current systems. South Carolina currently matches all cases, and is assumed to match all applicants not found in an existing case folder. Virginia matches a small fraction of applicants, and is assumed to reference the county file for a small fraction of those not found in the case folders.

Given these procedural variations, South Carolina is estimated to have much higher costs than Virginia, as shown in Exhibit 6-5. Costs in both States are higher than with the minimal system, reflecting the effort to create the disqualification file as well as the effort to access it. Because the disqualification file is a hard-copy file with manual access, costs would be very high in South Carolina, where all applicants not located in case folders are checked against the file.

Applicant matching benefits in South Carolina would be substantially greater with an expanded county system than with the minimal county system (about \$14 vs \$3 per 1,000 casemonths). Virginia's benefits would also be higher with the expanded system, but only slightly higher (\$0.04 per 1,000 case months) because Virginia is assumed to use the disqualification file only rarely.

Penalty assignment benefits for the expanded county system are assumed to be the same as with the minimal county system in Virginia and slightly higher in South Carolina. This assumption largely reflects the data limitations noted earlier, which preclude an accurate estimate of benefits in the minimal systems.

In sum, the expanded county system does not appear to offer significant fiscal advantages over the minimal system. With full use of the expanded system for applicant matching, as modeled for South Carolina, the system offers a substantial increase in benefits. But the manual nature of the system means that costs increase even more. With full applicant matching, the expanded system would generate a net cost of about \$39 per 1,000 case-months, compared to net benefits ranging from \$3 to \$4 in the minimal county systems.

6.4 State-level System Operations

The state-level system can be viewed as the intermediate step between the expanded county system and the national DRIPS system. Starting with the features of the expanded county system, the state-level system would centralize the disqualification database at the State level. State Agency personnel would maintain the file and make the information available to county office personnel for applicant matching and penalty assignment. Caseload matching would also be feasible.

Exhibit 6-5

Costs and Benefits per 1,000 Casemonths for Expanded County System
with Incremental Difference from the Minimal County System

	<u>New York</u>		<u>South Carolina</u>		<u>Virginia</u>	
	<u>Expanded County</u>	<u>Increment</u>	<u>Expanded County</u>	<u>Increment</u>	<u>Expanded County</u>	<u>Increment</u>
<u>System Operating Costs</u>						
Disq. Reporting	\$0.00	\$0.00	\$0.80	\$0.80	\$0.20	\$0.20
Applicant Matching	0.06	0.00	53.12	53.06	0.16	0.09
Penalty Assignment	0.01	0.00	0.88	0.84	0.01	0.00
Subtotal	0.07	0.00	54.80	54.70	0.37	0.29
<u>System Benefits</u>						
Applicant Matching	2.60	0.00	13.94	11.21	2.91	0.04
Penalty Assignment	0.25	0.00	1.68	0.21	0.35	0.00
Subtotal	2.85	0.00	15.62	11.42	3.26	0.04
<u>Net Benefit (Cost)</u>	2.78	0.00	(39.18)	(43.28)	2.89	(0.25)

Because the national DRIPS system and the state-level system have many functional similarities, the hypothetical state-level system is designed for each of the three study States by incorporating the features of the current DRIPS process and supplementing that process as necessary to complete

the system. For example, Virginia does not currently maintain a State Agency database of disqualified individuals, like those maintained in South Carolina and New York. To account for this requirement, a Virginia database is assumed in the analysis, along with the needed support and maintenance. This approach assumes that States would first make best use of already established DRIPS procedures when designing a State disqualification system, rather than designing an entirely different operation.

In reality, the approach embodied in these hypothetical systems is not the only way that a state-level disqualification system would be constructed. The main alternative would be to integrate the necessary disqualification information into the automated household data files that States maintain for caseload management and issuance (often called "automated certification systems"). These files typically contain considerable information on household characteristics related to the household eligibility and benefit amount. The files could in principle record the existence and status of any IPV disqualifications for any household member. Caseworkers or claimsworkers could enter disqualification information directly into the household data file. They could access the data when certifying new applicants and assigning IPV penalties, and the system could be programmed to automatically exclude any disqualified individual from the household budget (thus performing a function analogous to caseload matching). Data supplied by FNS indicate that 40-50 percent of all States' automated household files already have the capacity to perform at least minimal disqualification checking, and another 10-15 States are upgrading their automated systems in ways that could give them a disqualification reference capacity as well.

The following subsections describe the state-level disqualification system operations assumed for the three sample States.

New York. The basic components of a State disqualification system already exist in New York. A New York State disqualification system would utilize current disqualification reporting procedures and State Agency data entry of information into the existing database of disqualified individuals. Caseload matching would continue to be conducted quarterly, although it would only utilize state-originated disqualifications rather than the entire national DRIPS file.

New York county office caseworkers do not currently use DRIPS data for applicant matching or when determining the penalty to assign disqualification cases. However, case folders are referenced during routine processing of reapplicants and disqualification cases. The hypothetical state-level system in New York is assumed to follow these same procedures.

South Carolina. A South Carolina State disqualification system would be basically unchanged from that State's current operations in the national DRIPS system. Disqualification information would continue to be entered through on-line computer access from county offices. The State disqualification file, rather than the national file, would be referenced for all program applicants and penalty assignments. As with the current DRIPS system, caseload matching would be conducted monthly in the hypothetical South Carolina State system.

Virginia. Of the three study States, state-level disqualification system operations in Virginia would least resemble current DRIPS procedures in that State. The primary modification to current Virginia operations would be to expand the role of the State Agency to perform the database maintenance requirements of the State system. This State database would be used in the hypothetical system to produce hard-copy listings of disqualified cases, which would be distributed to county offices as in the current system.

The roles of Virginia county office caseworkers and claimswomen would change little. They would report disqualifications to the State Agency rather than directly to the Mid-Atlantic Regional Office. The State Agency would enter disqualification data into the State database, from which hard copy reports would be generated and distributed to county offices for

Exhibit 6-6

Costs and Benefits per 1,000 Casemonths for State-level System
with Incremental Difference from the Expanded County System

	<u>New York</u>		<u>South Carolina</u>		<u>Virginia</u>	
	<u>State</u>	<u>Increment</u>	<u>State</u>	<u>Increment</u>	<u>State</u>	<u>Increment</u>
<u>System Operating Costs</u>						
Disq. Reporting	\$1.66	\$1.66	\$2.07	\$1.28	\$1.55	\$1.35
Caseload Matching	0.27	0.27	2.47	2.47	NA	NA
Applicant Matching	0.06	0.00	4.39	(48.73)	1.18	1.02
Penalty Assignment	0.01	0.00	1.10	0.23	0.01	0.00
Subtotal	2.00	1.93	10.03	(44.75)	2.74	2.37
<u>System Benefits</u>						
Caseload Matching	4.82	4.82	5.48	5.48	NA	NA
Applicant Matching	2.60	0.00	14.74	0.80	2.91	0.00
Penalty Assignment	0.25	0.00	1.97	0.30	0.35	0.00
Subtotal	7.67	4.82	22.19	6.58	3.26	0.00
<u>Net Benefit (Cost)</u>	5.67	2.89	12.16	51.33	0.52	(2.37)

applicant matching. As with DRIPS operations in Virginia, no caseload matching would be performed.

As in the hypothetical New York State system, workers are assumed to reference the client case folder for applicant matching and penalty assignment purposes in the Virginia State system.

As shown in Exhibit 6-6, the hypothetical State systems would generate positive net benefits in all three States. Relative to the expanded county system, centralizing the disqualification database increases net benefits in two States. The Virginia State system would achieve lower net benefits than the expanded county system, for reasons discussed below.

In all three States, the cost of maintaining an automated state-level database would be noticeably higher than the cost of the manual county file. The difference is estimated at \$1.25 to \$1.65 per 1,000 casemonths.

The pattern of costs and benefits associated with the three applications of disqualification data (caseload matching, applicant matching, and penalty assignment) varies across the three States. This reflects the different procedures that States currently follow, which are assumed to carry over into the hypothetical systems. We describe the pattern for each State in turn.

Adding caseload matching, which is not feasible in the expanded county system, accounts for the majority of New York's net benefit increase. Quarterly caseload matching in New York yields approximately \$4.80 in benefit per 1,000 casemonths, against a cost of only \$0.27. The expanded geographic scope of the State disqualification database also raises penalty assignment benefits slightly without adding substantial cost for that activity.

In South Carolina, the most significant difference between the expanded county system and the State system is the reduced cost of applicant matching. Caseworkers in the State system reference disqualification information for all applicants (initial and reapplicant households), but the reference is automatically invoked during routine case processing and incurs no marginal cost unless a valid hit results. In the expanded county system, in contrast, caseworkers' manual references of the disqualification file were the dominant cost item. Although less significant than in New York, adding caseload matching in South Carolina also makes a contribution. Caseload matching generates approximately \$3 in net benefit per 1,000 casemonths.

Referencing the State disqualification database adds slightly to the net benefit of penalty assignment activities in South Carolina. Although claimswokers must invoke the system through a separate action (unlike the automatic invocation of the system for applicant matching), penalty assignment benefits still increase by more than the costs.

Virginia is the only study State in which net benefits decrease by moving from the expanded county system to State system, although positive net benefit is still attained. Two factors account for this result. First, disqualification reporting costs increase significantly by establishing an automated disqualification database at the State level. These additional responsibilities of State Agency personnel increase reporting costs by approximately \$1.35 per 1,000 casemonths. Secondly, applicant match costs increase significantly; costs are added to produce and distribute disqualification listings, while county office costs for the worker to reference the listing is essentially the same as the cost of referencing a locally-maintained hard copy file. Because workers only rarely reference anything but the case folder, however, the added data in the State file produce no measurable increase in benefit. Thus the expanded role of State Agency staff adds costs while the marginal benefit from state-level coverage of the database is only slight.

6.5 Overall Systems Cost-Effectiveness

Exhibit 6-7 presents the costs and benefits of the national DRIPS system with estimates of the three hypothetical systems included for comparison. For comparability to the hypothetical systems, National system estimates incorporate the costs and benefits of case folder references for applicant matching and penalty assignments. As shown in Exhibit 6-7, progressing from a decentralized to centralized system has differing effects in the three States.

Among the four New York systems, the state-level disqualification system generates the highest level of net benefits. The two county-level systems log substantially lower net benefits. This pattern reflects the fact that caseload matching, which is not possible in the county systems, is the major source of benefits in New York. Net benefits in the national system are very close to those of the State system. Using the national file yields

Exhibit 6-7

Cost and Benefit Summary per 1,000 Casemonths

	New York				South Carolina				Virginia			
	Minimal County	Expanded County	State	National	Minimal County	Expanded County	State	National	Minimal County	Expanded County	State	National
Mandatory Activities												
Costs												
Disqualification Reporting			\$1.66	\$1.81	\$0.80	\$2.07	\$2.25		\$0.20	\$1.55	\$0.46	
Data Maintenance/ Distribution				0.10				0.40				0.13
Penalty Assignment	<u>\$0.01</u>	<u>\$0.01</u>	<u>0.01</u>	<u>0.01</u>	<u>\$0.04</u>	<u>0.88</u>	<u>1.10</u>	<u>2.68</u>	<u>\$0.01</u>	<u>0.01</u>	<u>0.01</u>	<u>0.01</u>
Subtotal	<u>0.01</u>	<u>0.01</u>	<u>1.67</u>	<u>1.92</u>	<u>0.04</u>	<u>1.68</u>	<u>3.17</u>	<u>5.33</u>	<u>0.01</u>	<u>0.21</u>	<u>1.56</u>	<u>0.60</u>
Benefits												
Penalty assignment	0.25	0.25	0.25	0.25	1.47	1.68	1.97	2.04	0.35	0.35	0.35	0.35
Net Benefit (Cost)	0.24	0.24	(1.42)	(1.67)	1.43	(0.00)	(1.20)	(3.29)	0.34	0.14	(1.21)	(0.25)
Optional Activities												
Costs												
Applicant Matching	0.06	0.06	0.06	0.06	0.06	53.12	4.39	4.83	0.06	0.16	1.18	0.87
Caseload Matching			<u>0.27</u>	<u>0.36</u>			<u>2.79</u>	<u>2.79</u>				
Subtotal	<u>0.06</u>	<u>0.06</u>	<u>0.33</u>	<u>0.42</u>	<u>0.06</u>	<u>53.12</u>	<u>6.86</u>	<u>7.62</u>	<u>0.06</u>	<u>0.16</u>	<u>1.18</u>	<u>0.87</u>
Benefits												
Applicant Matching	2.60	2.60	2.60	2.60	2.74	13.94	14.74	15.19	2.86	2.91	2.91	2.91
Caseload Matching			<u>4.82</u>	<u>5.06</u>			<u>5.48</u>	<u>5.63</u>				
Subtotal	<u>2.60</u>	<u>2.60</u>	<u>7.42</u>	<u>7.66</u>	<u>2.74</u>	<u>13.94</u>	<u>20.22</u>	<u>20.82</u>	<u>2.86</u>	<u>2.91</u>	<u>2.91</u>	<u>2.91</u>
Net Benefit Cost	2.54	2.54	7.09	7.24	2.68	(39.18)	13.36	13.20	2.80	2.75	1.73	2.04
Total Net Benefit (Cost)	2.78	2.78	5.67	5.57	4.11	(39.18)	12.16	9.91	3.14	2.89	0.52	1.79

greater benefits from caseload matching, but the costs of transmitting data to and from the national file and using the larger file in caseload matching exceed the gain in benefits.

South Carolina shows some aspects of the same pattern: the State system yields somewhat higher net benefits than the national system, and the county systems are far behind. The expanded county system would have a large negative net benefit in South Carolina, because referencing a hard copy file for all new applicants would be very costly. Comparing the State and National systems, the expanded coverage of the national file would yield increased benefits for all three uses of the disqualification system, but the increased cost of processing the larger file outweighs the extra issuances avoided.

The Virginia results differ strikingly from the other two States, with the minimal county system yielding the greatest net benefit. This occurs because we assumed that Virginia's limited use of DRIPS data would also characterize the hypothetical systems. Virginia performs no caseload matching and only limited applicant matching apart from case folder references, so the cost of maintaining a central disqualification file does not have commensurate benefits. In fact, the estimated benefits from all four systems in Virginia are nearly the same, giving the system with the least cost the greatest advantage.

6.6 Conclusion

The current DRIPS system represents only one of several possible strategies for maintaining and using information on disqualifications. This chapter has considered three alternatives to the national disqualification file: a state-level automated file, a county-level paper file, or information maintained only in individual case folders.

Each successive level of centralization increases the capability of the system to enforce disqualification regulations by providing information on an additional class of persons who might have been disqualified:

- the minimal county system (case folders only) provides information on people whose previous disqualification occurred in the same household and in the same county in which they are now being checked;

- the expanded county system (case folders plus a county-level paper file) also provides information on people whose disqualification occurred in a different household, but still within the same county in which they are now being checked;
- the State system (case folders plus a state-level automated file) adds people whose disqualification occurred in a different county, but within the same State where they are now being checked; and
- the National system (case folders plus a national automated file) covers everyone with a disqualification anywhere in the country.

This pattern means that, for any given use of the disqualification data, a more centralized system will yield greater benefits (i.e., will avoid more issuances to disqualified individuals). The pattern of increased benefits depends on how the information is used, however:

- For **penalty assignment references**, most of the possible benefit (72 percent of the National system's benefit) is achieved with just the case folder. Adding a county- or state-level disqualification file raises the benefits to 82 percent or 97 percent, respectively.
- For **applicant matching**, the case folder approach is estimated to capture only 18 percent of the possible benefit. This percentage increases dramatically with either a county- or state-level file, to 92 and 97 percent, respectively.
- **Caseload matching** is assumed not to be possible with either of the county-level approaches. State-level caseload matching is estimated to capture nearly all (97 percent) of the benefit achieved with a National file, however.

The difference in benefits achieved at the various levels of centralization can be estimated only crudely with available data. The figures presented here are based on analyzing pairs of disqualification records on the existing DRIPS file, using a single central measure of the proportion of pairs in which both qualifications occurred in the same State or county. To test the sensitivity of the estimates, all of the benefits and costs were recalculated for the three study States using the proportions observed in the DRIPS file for each State. Although the proportions differed slightly, the overall pattern of benefits was not materially affected.

Like the benefits, costs generally rise with increased centralization. The pattern for costs is more complicated than for benefits, however. Maintaining any centralized file adds costs; the costs are higher for an automated file than a paper one, and higher for a national file than a State one because of the increased data transmission. Accessing the centralized file also adds costs, but these costs do not necessarily increase with the level of centralization. Manual access is more costly than automated access, which means that using the automated State or National systems can be cheaper than using the county-level paper files. If, however, the automated files are used simply by printing out listings of their contents, then access costs are similar to the cost of using hard copy files.

Both the costs and the benefits of a disqualification system depend on how, and how much, it is used. In most of the situations examined, the benefit of each usage exceeds its costs -- hence, the more the system is used, the greater the net benefit. South Carolina, which makes the greatest use of the current DRIPS system and is assumed to do the same in the hypothetical systems, shows substantially greater net benefits than the other study States when we consider the State or the National systems. The exception to the general rule concerns applicant matching with the county-level paper file. The marginal cost of manual access is greater than the marginal benefit, so South Carolina's policy of 100 percent applicant matching would lead to a large negative net benefit. Except where applicant matching requires manual access, then, higher levels of system usage are consistently associated with greater net benefits.

Among the four disqualification system strategies, the state-level system is estimated to yield the greatest net benefit when the level of system usage is moderate to high. In New York and South Carolina, therefore, the State system yields the best results, although the National system's net benefit is quite close. In Virginia, which makes very limited use of DRIPS data and is assumed to follow the same policy in the hypothetical systems, relying exclusively on case folders provides the greatest net benefit; in other systems, the usage is too low to produce benefits greater than the cost of maintaining a centralized file.

These results suggest that the state-level disqualification system may represent a reasonable alternative to DRIPS, one which is worth further policy consideration. The state-level system appears in this analysis to have at least a small advantage in net benefits over the national system. While

this analysis is far from definitive, two other factors also suggest consideration of state-level options. First, the requirements of the Computer Matching and Privacy Protection Act will tend to make the national DRIPS system more costly than shown in this analysis. Second, many States may be able to include disqualification data in their automated household files rather than maintaining a separate database, which might make state-level systems less costly than the estimates shown here. Both of these factors would increase the state-level system's advantage over the national DRIPS system in terms of net fiscal benefits.

CHAPTER 7

LIMITATIONS OF THE ANALYSIS AND POSSIBLE FUTURE RESEARCH

The analyses presented in this report are based on data with significant limitations. It is important to bear these limitations in mind in using the present study's results, and to consider ways to overcome the limitations if any future analyses of DRIPS or related disqualification reporting systems are undertaken. To this end, this chapter reviews briefly the limitations of the current study and addresses in more detail the question of what properties would be desired for measuring a disqualification reporting system's costs and benefits.

The chapter first reviews the conceptual framework for assessing DRIPS or analogous systems (Section 7.1). It then describes in turn the procedures necessary to measure the costs (Section 7.2) and the benefits (Section 7.3) of such systems.

7.1 Conceptual Framework

The general framework for examining a disqualification reporting system's costs and benefits has been laid out in previous chapters. To summarize, the key elements are as follows:

	<u>Cost</u>	<u>Benefit</u>
Entering disqualification data and maintaining disqualification file	X	
Disseminating data to States (in a national system only)	X	
Penalty assignment references	<u>X</u>	<u>X</u>
Applicant matches	X	X
Caseload matches	X	X
Total	X	X

The preliminary analyses conducted in this study indicate the importance of measuring separately the costs and benefits of the three major applications of a disqualification reporting system. Because the three applications seem to have substantially different results, a single general

measure will offer little guidance about, for example, what a State can do to improve the cost-effectiveness of its system.

Similarly, it will be desirable in a national system to separate the costs associated with data entry and disqualification file maintenance from the costs of disseminating data to the States. These two cost components may change at different rates as, for example, DRIPS usage increases or changes are made in the technology for transmitting data between the States and the national data base.

Each of the cost and benefit components must be measured in three different terms:

- Total monthly costs (benefits). This figure is useful for assessing the overall level of resources devoted to the system and benefits resulting from it. The total could equally well be expressed in annual rather than monthly terms.
- Cost (benefit) per 1,000 casemonths. This measure scales total costs and benefits to adjust for caseload size. This will be the most useful measure for comparing States' or systems' overall performance.
- Cost (benefit) for performing the activity once (or a fixed number of times). This figure will be especially useful for identifying States or systems that have promising low-cost or high-yield procedures. We suggest the following units of measure:

<u>Component</u>	<u>Cost (benefit) measurement</u>
Entry of disqualification data and maintaining disqualification file	per 100 records entered
Disseminating disqualification data to States	per 100 records on the disqualification file
Penalty assignment references	per 100 cases referenced
Applicant matches	per 100 cases referenced
Caseload matches	per 100 cases referenced

A key decision for any research on disqualification reporting systems will be the number of States to include. The present research, in

examining just three States, found that they differed dramatically in the procedures they use and in their costs and benefits. This means that results from this analysis--or from any analysis of a small sample of States--cannot be considered representative of the Food Stamp Program as a whole.

If a truly representative estimate of DRIPS costs and benefits were desired, then, the analysis would have to be based on a very large sample of States--ideally, all of them. This suggests the desirability of using data routinely generated by monitoring systems. If monitoring systems already produce appropriate data, or near-appropriate data, this will be a much less costly research approach than a special study.

As discussed in the next section, current monitoring systems are not adequate for assessing the costs and benefits of DRIPS or alternative disqualification reporting systems. If representative data are desired, then, it will be necessary to undertake a special study.

Obtaining systematic information about States' actual procedures for DRIPS or alternative systems might be a useful first step toward resolving this difficulty. It seems unlikely that each State has a unique approach to DRIPS; more plausibly, they could be categorized into a few groups. If so, FNS could probably obtain information on a few States in each group and be reasonably confident about projecting the findings to the other States in the group. In any event, obtaining information about each State's actual disqualification-related procedures would be a useful first step in any further consideration of the issue.

7.2 Measuring Disqualification System Costs

Disqualification system costs are predominantly for wages and computer-related expenses. Labor costs tend to be concentrated at the local office, where workers record the disqualification information and access it to determine recipients' penalty status. Computer-related costs are incurred at the State, regional, and/or national levels, depending on the design of the system.

Labor devoted to the disqualification system does not generally represent full-time staff assignments, but small portions of various workers' time. This is especially true at the local office, where disqualification

activities make up only a small fraction of time for eligibility workers and claims workers. Computer processing for the disqualification system is also integrated with other activities in the sense that it does not generally use separate hardware or facilities. Maintenance of the national DRIPS file is a stand-alone activity distinct from other food stamp functions, but the distinctions are less clear at the State level.

These characteristics of disqualification system costs mean that normal cost accounting procedures are not likely to record separately the cost components that are needed for a benefit-cost evaluation. That problem was made clear in the research for this report. The only DRIPS cost element that was found to be separately recorded was the computer-related cost of maintaining the DRIPS file at the national level. For all other elements, the DRIPS cost was absorbed within some broader reporting category. We interviewed people responsible for the activities associated with each DRIPS cost element to obtain estimates of the portion of category cost attributable to DRIPS, but our respondents generally said that their estimates should be considered no more than "best guesses."

One obvious implication of this situation is that the cost figures presented in this report are quite imprecise, and may be used with caution. A definitive assessment of DRIPS or any disqualification system would require more precise measurement procedures. The possible bases for such measurement are considered below. We begin by describing ways that routine reporting systems might produce on-going measures of disqualification system cost elements, focusing on reports that are or might be associated with the current DRIPS system. For those cost elements for which routine reporting might be infeasible, alternative "special study" measurement strategies are briefly described. Exhibit 7-1 summarizes the major data elements needed.

WCC

The computer center housing the DRIPS data can relatively easily produce data describing operating costs and DRIPS activity for a month or other period. The data should separate the costs for entering FNS-524 data and maintaining the DRIPS file from costs associated with disseminating DRIPS data printouts or tapes to the States. The report should contain the number of records on the DRIPS data base at the end of the month and the number of records added (i.e., FNS 524s entered) during the month; these items should be reported by Region and State to facilitate measurement of other cost elements.

Exhibit 7-1

DRIPS Cost Elements to be Measured

National level

Entering 524s/maintaining file

524s entered per month

Disseminating data to Regions/States

FNS costs per month

WCC costs per month

records on DRIPS file

Regional level

Entering 524s

Computer costs per month

Personnel costs per month

524s entered per month

Disseminating data to States

Computer costs per month

Personnel costs per month

DRIPS records for region per month

State level

Entering 524s

Computer costs per month

State personnel costs per month

Local personnel costs per month

524s entered per month

Caseload match

Computer cost per match run

State personnel costs per match run

Local personnel costs per match run

cases checked per match run

match runs per month

Applicant match

Computer cost per month

State personnel costs per month

Local personnel costs per month

cases checked per month

Penalty assignment reference

Computer cost per month

State personnel cost per month

Local personnel costs per month

cases checked per month

FNS DRIPS Staff

Costs incurred by FNS personnel working directly with the DRIPS system could be self-reported. Because very few FNS staff work directly on the system, the individual with primary DRIPS responsibility could produce a memorandum indicating the number of hours spent by each FNS staff member for a given period, and the salary and fringe benefit costs associated with those hours.

This data collection method is likely to obtain retrospective estimates of time spent for the month, which will not be highly precise. The imprecision should be acceptable, however, because FNS personnel costs make up only a small portion of the total. If more precision were desired, staff could fill out weekly time sheets reporting the number of hours spent on DRIPS each day of the week.

Another alternative is to ask FNS staff with any DRIPS involvement to estimate the amount of time they spent on DRIPS in the past month and in the typical month over the past year. This procedure, which is essentially what was done for the present study, will yield relatively crude estimates, but may be sufficient for the purpose.

A significant component of the FNS National DRIPS cost is the non-labor cost of producing monthly and quarterly reports and tapes of DRIPS data and distributing this material to States. This information is also reasonably easy to obtain from existing records.

Regional Computer Center

Computer centers at the FNS Regional Offices may be involved in entering data from the FNS-524s and/or in requesting and disseminating DRIPS reports or tapes. These centers may already produce routine reports allocating costs to particular functions, in which case it should be relatively easy to obtain the two DRIPS cost elements.

If no routine reporting currently exists, computer costs can be estimated through interviews with Regional Office staff familiar with DRIPS computer operations. The respondents would be asked to allocate total computer costs between DRIPS and other uses for a defined period (at least one quarter, but preferably a full year).

Regional Office DRIPS Report

The information needed on DRIPS costs at the Regional Office level could readily be recorded by Regional office staff. They could report the number of hours worked on DRIPS activity by various categories of staff, and the associated salary and fringe benefit costs. The report should also show the level of DRIPS activity in the region, in particular, the number of FNS-524s key entered and transmitted to DRIPS headquarters (or forwarded after key entry by States) and the number and nature of tapes or printouts of DRIPS data obtained and transmitted to States.

Labor costs could also be measured through time record systems, where they exist, or a special study. In the latter case, the special study should use a relatively structured work measurement technique (such as a time log) in order to ensure data comparability across Regional Offices.

State Computer Center

States may incur computer-related costs for as many as four DRIPS activities: key entering FNS-524s, caseload matching, applicant matching, and penalty assignment references. Some States may incur no computer costs at all, if they send FNS-524s to the Regional Office for key entry and conduct DRIPS references by using printouts rather than automated searches of computer files. In States that do incur computer costs, it would be desirable for the computer center to produce a report on DRIPS-related costs, by activity.

Relatively few States have routine reporting systems that are capable of producing this kind of detail about computer costs. Accordingly, interviews with States' computer center personnel would be needed to devise means of estimating the level of computer utilization associated with DRIPS activities. This information will then have to be related to more general utilization measures to estimate an appropriate allocation of costs to DRIPS.

State Time Allocation System

All State welfare departments have systems for allocating costs between the Food Stamp Program and other programs the departments operate (e.g., AFDC, Medicaid), and for allocating food stamp costs among the various categories specified in the FNS cost reporting forms (e.g., certification, fraud control). Ideally, these systems would produce routine information at least quarterly on DRIPS costs for State and local personnel.

Two factors make this ideal unlikely. First, many States' current allocation systems are unable to measure DRIPS activity separately. At the State level, salary expenditures tend to be allocated on the basis of the overall responsibility of the organizational unit, and DRIPS activity is generally too limited to warrant a separate unit. Although some States use time studies to allocate local office personnel costs, very few use methodologies that could capture activities that account for only a tiny fraction of workers' time, as DRIPS does.

The second major problem is that allocation systems are mainly designed to separate food stamp costs from those of AFDC and other programs for reimbursement purposes. The general practice is that local office work concerning Public Assistance (PA) food stamp cases -- that is, cases that also receive AFDC -- is considered AFDC cost. Because DRIPS activities are carried out for PA as well as Non-Public Assistance (NPA) cases, accurate measurement of DRIPS costs could introduce a conflicting definition of "food stamp costs," and might require major modification of the cost allocation methodology.

Given these obstacles to using the existing cost allocation system, State and local labor costs for DRIPS would probably have to be measured through a special data collection effort. State-level personnel associated with DRIPS could maintain time logs for a defined period of time (at least a month) to record time devoted to DRIPS activities. For local office staff, a time log or random moment study approach would be desirable, but the infrequent occurrence of DRIPS activities might make these methods prohibitively costly or burdensome. The best choice in this situation might be a survey-based procedure, in which large numbers of workers estimate the amount of time they spend on DRIPS tasks and their frequency.

State-level DRIPS Activity

Calculating unit costs requires State-level information on the number of cases referenced in each type of DRIPS activity (caseload matches, applicant matches, and penalty assignment references). Producing this information should be straightforward for States whose DRIPS activities are automated. States with manual procedures would probably require local office tabulations of the number of references of each type made during the month.

7.3 Measuring Disqualification System Benefits

Measuring the benefits of a disqualification system requires information about the results of references to the disqualification data base. Specifically, State-level information is needed on the valid hit rate for references, and the number of months of issuances avoided and the average monthly allotment avoided by a valid hit. Each of these information items is needed separately for caseload matches, applicant matches, and penalty assignment references. For each type of reference, it is important to separate hits on cases whose penalty status is active from those with a pending penalty status.

Very little of the data needed to measure these benefit elements is currently maintained, as indicated by the present study. None of the three study States had any data on the number of months of issuances avoided or the average monthly allotment avoided by a valid hit; in fact, none of our respondents was comfortable even "best guessing" at these factors. Somewhat better information was available on valid hit rates, but it was still mainly rough estimates in interviews. Two of the three States maintain some data on the results of DRIPS matches, but this pertains only to caseload matching, not applicant or penalty assignment references. Like the cost data, then, the measures of DRIPS benefits presented in this report must be considered quite imprecise and used with considerable caution.

States with automated disqualification reporting systems could in principle build in follow-up requirements that would produce the above information. For example, each time a disqualification reference produces a hit, the caseworker might be required to respond with the following information:

- validity of the hit
- change in penalty assignment (for penalty assignment references only)
- active or pending status of penalty assigned (for penalty assignment references only)
- number of months since the most recent case opening (for caseload matches and penalty assignment references)
- amount of monthly allotment affected by the penalty (i.e., the amount of reduction in the case's allotment due to the individual's disqualification)

Although adding this follow-up component to an automated system might not be technically difficult, it could impose a cost in terms of caseworker time that States would be reluctant to accept. Similarly, States with manual systems could require workers to file disqualification reference follow-up reports, but few are likely to want to take on this burden.

Accordingly, any improvement in the data for benefit calculations would probably have to come from special data collection efforts. The exception might be the valid/invalid nature of the DRIPS hit, which States may be interested in capturing for system management purposes. For other items, the easiest approach would probably be to ask a sample of the workers responsible for DRIPS references to provide follow-up information for all references carried out during a defined period.

It should be noted that follow-up data cannot produce definitive information on the number of months of issuances avoided by a valid DRIPS hit. Estimating benefits therefore requires an assumption about how many months of benefits a recipient would have gotten after the time of the DRIPS hit, if the hit had not occurred. In the analysis presented in Chapter 5, we simply assumed that the DRIPS case would have followed the same participation trajectory as the average food stamp case nationwide. Given more information about the characteristics of DRIPS cases and the length of time they have already participated, analytic refinements are possible: in effect, one can use the participation trajectory for cases that resemble the DRIPS cases (in terms of household composition, income sources, etc.) rather than the average participation trajectory for all cases.

Even this refined assumption would be vulnerable to error. Unfortunately, however, a more valid estimate could be obtained only through a controlled experiment in which some valid DRIPS hits were randomly selected, excluded from further penalty action, and tracked in terms of their subsequent benefit receipt. Such a study would be costly, and the deliberate non-enforcement of program fraud regulations could raise legal and ethical issues. Hence it is not likely that such a study would be deemed worthwhile.

7.4 Conclusion

Any attempt to assess the costs and benefits of DRIPS or alternative disqualification reporting systems at present is constrained by data limitations. The estimates presented in this report must therefore be used very carefully. They are based on only three States, and it is clear that the dramatic differences in States' disqualification reporting procedures make it impossible to generalize beyond the three study States.

Moreover, the estimates for the study States are quite imprecise. Hardly any of the cost or benefit components could be measured with "hard" data. Many were estimated on the basis of "best guesses" from individuals involved in DRIPS operations, and some estimates involved assumptions based on general national participation patterns.

For a more precise assessment, FNS would need an analysis based on empirical data from a large number of States. A few of the necessary data items could come from existing data systems. For the most part, however, any such assessment would require either substantial modifications to existing systems, special data collection efforts, or some combination of the two.

Appendix B

Report Format Distribution by Receiving State Agency

	Tape	Hardcopy	Nothing
Alabama			x
Alaska	x		
Arizona	x		
Arkansas			x
California	x		
Colorado	x		
Connecticut	x		
Delaware	x		
District of Columbia	x	x	
Florida	x		
Georgia			x
Guam	x		
Hawaii	x		
Idaho	x		
Illinois			x
Indiana			x
Iowa	x		
Kansas	x		
Kentucky	x		
Louisiana			x
Maine	x		
Maryland		x	
Massachusetts		x	
Michigan			x
Minnesota			x
Mississippi	x		
Missouri	x		
Montana		x	
Nebraska	x	x	
Nevada	x		
New Hampshire		x	
New Jersey	x		
New Mexico	x		
New York	x		
North Carolina	x	x	
North Dakota	x		
Ohio			x
Oklahoma	x		
Oregon	x		
Pennsylvania	x	x	
Rhode Island		x	
South Carolina	x		
South Dakota		x	
Tennessee	x		
Texas	x		
Utah	x		
Vermont		x	
Virginia		x	
Virgin Islands		x	
Washington	x		
West Virginia	x	x	
Wisconsin			x
Wyoming	x		

Appendix C

DETAILED DRIPS OPERATING COST SUMMARY

This appendix presents a detailed breakdown of the DRIPS operating costs. These costs cover processing FNS-524 data, generating and distributing DRIPS reports, conducting caseload and applicant matches and referencing DRIPS data when assigning IPV disqualifications at the relevant levels of Food Stamp Program administration. The cost data presented in this appendix are summarized in Exhibits 3-1 through 3-5 of Chapter 3.

Brief descriptions of the primary cost components are included within each section of this appendix. These descriptions identify the source of the data and the methodology employed, in cases where cost data were not directly reported.

C1. FNS National FNS-524 Monthly Cost

Exhibit C1 presents the detailed cost breakdown for FNS-524 processing activities conducted at the FNS National level. These costs are summarized in Exhibit 3-1 of Chapter 3.

- Machine Cost. Based on data provided by FNS. These data represent the average monthly computer-related costs computed over fiscal year 1987.
- Labor Cost. Approximately 18% of monthly senior programmer time is devoted to FNS-524 activities. These activities include handling tapes from State Agencies, running taped data into the system and initiating the computer jobs to update and edit the National file with data transmitted from Regional Offices.
- Other Direct Cost. Cost per FNS-524 form is computed from a total cost of \$4350.00 for 120,000 forms purchased during November, 1986.

Exhibit C1

FNS NATIONAL FNS-524 MONTHLY COST

Average Monthly Number of FNS-524 8,272

Machine Cost

On-line processing of telecommunicated
data from Region cost / FNS-524 \$0.04
Average Monthly Cost \$352.43

Creation of WCC workfile from telecom-
municated data from Region cost / FNS-524 \$0.00
Average Monthly Cost \$0.67

Merge workfile into DRIPS database cost
/ FNS-524 \$0.02
Average Monthly Cost \$141.87

Subtotal / FNS-524 \$0.06
Subtotal \$494.97

Labor Cost

Number of FTEs 0.18
Monthly Salary \$2,894.92
Fringe Benefit Rate 0.2

Total Monthly Labor Cost / FNS-524 \$0.08
Total Monthly Labor Cost \$636.88

Other Direct Cost

Cost per FNS-524 form \$0.04

Total Monthly Other Direct Costs \$299.84

Total Monthly Federal FNS-524 Cost \$1,431.69
Cost per FNS-524 \$0.17

C2. FNS National Report Generation and Distribution Cost

Monthly costs incurred at the FNS National level to generate and distribute DRIPS reports are presented in Exhibit C2. Data from this exhibit is summarized in Exhibit E-2.

- Machine Cost. Based on data provided by FNS. These data represent the average monthly computer-related costs computed over fiscal year 1987.
- Labor Cost. Total labor cost is divided into professional and support staff components. Professional labor accounts for approximately 13% of monthly senior programmer time. These activities include initiating report generation computer procedures and participating in the quarterly hardcopy mailout. Support staff time requires 30 hours per quarter at \$13.52 per hour. All support staff time is devoted to assisting in the quarterly hardcopy report mailing.
- Other Direct Cost. All other direct components are incurred quarterly. Monthly costs are computed from cost data provided by FNS.

Exhibit C2

FNS NATIONAL REPORT GENERATION AND DISTRIBUTION COSTS

Machine Cost

Load and process data onto tape	
Average Monthly Cost	\$104.39
Hardcopy report generation	
Average Monthly Cost	\$1,514.14
Subtotal	\$1,618.53

Labor Cost

Number of Professional FTEs	0.13
Monthly Salary	\$2,894.92
Fringe Benefit Rate	0.2
Monthly Professional Labor Cost	\$451.61
Other Support Labor Cost	\$135.20

Subtotal	\$586.81

Other Direct Cost

Monthly Hardcopy Postage Cost	\$65.08
Monthly Tape Postage Cost	\$81.21
Monthly Reduction Copier Cost	\$133.33
Monthly Paper Supply Cost	\$208.33

Subtotal	\$487.96

	=====
Total Monthly Federal Cost	\$2,693.30

C3. Regional Office Monthly FNS-524 Cost

Monthly Regional Office costs to process FNS-524 data submitted by States and transmit that information to WCC are presented in Exhibit C3. Data from this exhibit are summarized in Exhibit 3-1.

- Machine Cost. Estimates provided by Regional Office personnel for the machine cost to key enter FNS-524, transmit the data to WCC and receive rejected data transmissions back from WCC.
- Labor Cost. Labor cost is divided into data entry and data preparation labor. Both cost estimates were provided by Regional Office personnel and assume a 20% fringe rate. Data entry efforts are relatively constant across Regional Offices (averaging about 40 minutes per 50 forms). The following shows monthly data preparation labor components.

	<u>NERO</u>	<u>SERO</u>	<u>MARO</u>
Monthly Labor (hours)	30	7.5	24
Salary Level	GS-11	GS-9	GS-4

- Other Direct Cost. Accounts for postage cost of mailing rejected data back to State Agency.

Exhibit C3

REGIONAL OFFICE MONTHLY FNS-524 COST

Regional Office	NERO	SERO	MARO
Average Monthly Number of FNS-524	884	1,247	300
 Machine Cost -----			
Machine time for key entry, transmission and transmission receipt of FNS-524 data			
Monthly Machine Cost / FNS-524	\$0.02	\$0.01	\$0.01
Average Monthly Cost	\$18.72	\$14.62	\$2.64
 Labor Cost -----			
Monthly data entry cost / FNS-524	\$0.18	\$0.12	\$0.10
Total Monthly data entry cost	\$156.03	\$146.16	\$28.80
Monthly labor cost for preparation of forms for data entry / FNS-524	\$0.61	\$0.09	\$0.71
Total monthly preparation cost	\$540.81	\$111.76	\$211.60
 Subtotal / FNS-524	 \$0.79	 \$0.21	 \$0.80
Subtotal	\$696.84	\$257.92	\$240.40
 Other Direct Cost -----			
Monthly Postage Cost for Rejected Data	\$31.57	\$51.96	\$6.25
Subtotal / FNS-524	\$0.04	\$0.04	\$0.02
 Total Monthly RO FNS-524 Cost	 =====	 =====	 =====
Cost per FNS-524	\$747.14	\$324.49	\$249.29
	\$0.85	\$0.26	\$0.83

C4. Regional Office Monthly Report Distribution Cost

Exhibit C4 presents Regional Office monthly costs incurred in activities related to receiving and distributing DRIPS reports. This information is provided at the summary level in Exhibit 3-2.

- Labor Cost. Accounts for staff time involved in receiving hardcopy reports from FNS and distributing the reports to State Agencies. The following shows monthly Regional Office report distribution labor components:

	<u>NERO</u>	<u>SERO</u>	<u>MARO</u>
Monthly Labor (hours)	10	2.5	1
Salary Level	GS-11	GS-9	GS-11

- Other Direct Cost. Accounts for postage cost of mailing reports to State Agencies.

Exhibit C4

REGIONAL OFFICE MONTHLY REPORT DISTRIBUTION COST

Regional Office	NERO	SERO	MARO
<u>Labor Cost</u>			

Labor for distributing reports to States	\$180.28	\$37.25	\$15.00
<u>Other Direct Cost</u>			

Report Distribution Monthly Postage Cost	\$10.16	\$4.96	\$53.79
	=====	=====	=====
Total Monthly RO Report Cost	\$190.44	\$42.21	\$68.79

C5. State Level Monthly FNS-524 Cost

State level FNS-524 processing costs are presented in Exhibit C5. For convenience, these costs are separated into State Agency and county office components. This information is summarized in Exhibit 3-1.

A. State Agency FNS-524 Cost

- Machine Cost. Monthly machine cost to enter FNS-524 information submitted from county offices. Costs are only applicable in New York and South Carolina.
- Labor Cost. New York labor accounts for data entry of FNS-524 data onto microcomputer, distributing data to Regional Office and other related tasks. South Carolina labor accounts for a portion of monthly duties of National Disqualification Coordinator and file maintenance activities.
- Other Direct Cost. Accounts for postage cost of mailing reports to State Agencies.

B. County Office FNS-524 Monthly Cost

- Labor Cost. County office labor associated with form preparation and submission, and resolution of rejected data. Claimsworker time per FNS-524 form is estimated at approximately 5-6 minutes. Regional wage differences account for differing cost levels.
- Other Direct Cost. Accounts for postage cost of mailing forms to State Agency or Regional Office.

Exhibit C5

STATE LEVEL MONTHLY FNS-524 COST

A. State Agency FNS-524 Cost

State Agency	NY	SC	VA
Average Monthly Number of FNS-524	222	261	65
Machine Cost			

Monthly machine time allocated to entry and database / FNS-524	\$0.83	\$0.38	NA
Total Monthly Machine Cost	\$184.90	\$100.00	NA
Labor Cost			

Monthly labor cost for FNS-524 distribution to Regions, etc. / FNS-524	\$10.97	\$1.22	NA
Total Monthly Labor Cost	\$2,436.25	\$318.67	NA
Other Direct Cost			

Monthly other direct cost / FNS-524 (includes forms, postage, etc.)	\$0.11	\$0.10	NA
Total Monthly Other Direct Cost	\$25.00	\$25.00	NA
State Agency Subtotal	-----	-----	--
Cost per FNS-524	\$2,646.15	\$443.67	NA
	\$11.92	\$1.70	NA

Exhibit C5 (continued)

STATE LEVEL MONTHLY FNS-524 COST

B. County Office FNS-524 Cost

Labor Cost

Monthly labor cost for FNS-524 preparation and error resolution / FNS-524	\$0.96	\$1.04	\$1.09
Total Monthly CO FNS-524 Labor Cost	\$213.46	\$271.72	\$70.81

Other Direct Cost

Monthly FNS-524 Postage Cost	\$25.00	NA	\$21.08
County Office Subtotal	\$238.46	\$271.72	\$91.89
Cost per FNS-524	\$1.07	\$1.04	\$1.41
Total Monthly SA FNS-524 Cost	\$2,884.61	\$715.38	\$91.89
Cost per FNS-524	\$12.99	\$2.74	\$1.41

C6. State Level Caseload Matching Cost

The monthly costs to conduct caseload matching procedures in New York and South Carolina are presented in Exhibit C6 and summarized in Exhibit 3-3 of Chapter 3.

A. State Agency Caseload Matching Cost

- Number of False and Valid Hits per Match. Overall match frequency is based on reported data

Distribution between false and valid hit rates is based on estimates provided by State Agency personnel.

- Machine Cost. Accounts for the data processing machine time to conduct caseload match.
- Labor Cost. Accounts for State Agency staff time to review reports, validate matches (New York only), and distribute results to county offices.
- Other Direct Costs. Postage cost of mailing reports to county offices.

B. County Office Caseload Match Cost

- Labor Cost. The following shows county office staff time (in minutes) for caseload match activities:

	<u>NY</u>	<u>SC</u>
Valid Hit		
Caseworker time	15	10
Claimsworker time	15	15
Claimsworker Sup. time	0	15
False Hit		
Claimsworker time	NA	5
Claimsworker Sup. time	NA	5

Exhibit C8

STATE LEVEL PENALTY REFERENCE COST

A. State Agency Penalty Reference Cost

State Agency	NY	SC	VA
<u>Parameters</u>			
Number of monthly disqualifications	222	261	65
Pcnt of penalties referenced with DRIPS	0%	100%	0%
Number of References	0	261	0
<u>Machine Cost</u>			
Machine cost to generate reference file, etc.	NA	\$133.33	NA
Cost per 100 References	NA	\$51.09	NA
<u>Labor Cost</u>			
Labor cost for file maintenance etc.	NA	\$318.67	NA
Cost per 100 References	NA	\$122.09	NA
State Agency Subtotal	--	-----	--
	NA	\$452.00	NA
Cost per 100 References	NA	\$173.18	NA

Exhibit C8 (continued)

B. County Office Penalty Reference Cost

State Agency	NY	SC	VA
<u>Labor Cost</u>			
Labor cost per penalty reference	NA	\$1.74	NA
Total Monthly CO Labor Cost	NA	\$452.86	NA
Cost per 100 References	NA	\$173.51	NA
	==	=====	==
Total Monthly SA Reference Cost	NA	\$452.00	NA
Total Monthly CO Reference Cost	NA	\$452.86	NA
	--	-----	--
Total Monthly State Reference Cost	NA	\$904.86	NA
Total Cost per 100 References	NA	\$346.69	NA



Appendix D

HYPOTHETICAL SYSTEMS OPERATING COST SUMMARY

This appendix presents a breakdown of the operating costs for the three hypothetical systems discussed in Chapter 5. These costs cover disqualification reporting, applicant matching, penalty assignment references and caseload matching. For reasons discussed in Chapter 5, disqualification reporting costs are only applicable in the expanded county and state systems and caseload matching costs apply only to the state system. The cost data presented in this appendix are summarized in Exhibits 5-3 through 5-7.

Brief descriptions of the primary cost components are included within each section of this appendix. These descriptions identify the source of the data and the key assumptions employed for estimation purposes.

D.1 Monthly Disqualification Reporting Costs

Exhibit D1 presents the monthly operating costs for disqualification reporting activities. Because a disqualification data base is not maintained in the minimal county system, no disqualification reporting costs are assumed in the analysis.

Expanded County System

County Office Level

- Labor Cost. Based on the average of New York and Virginia National system unit costs since disqualification reporting in the expanded county system most resembles the FNS-524 reporting efforts of claimswomen in those States.

State System Costs

State Agency Level

- Labor Cost. For New York and South Carolina, the cost is assumed to equal the State Agency unit labor cost for National system FNS-524 processing. Since Virginia does not currently maintain a state-level data base for these purposes, an average of the other two States is used.
- Machine Costs. Machine costs are based on the same approach used for estimates of State Agency labor cost.

Exhibit D1

Hypothetical System

Monthly Disqualification Reporting Cost Summary

	New York		South Carolina		Virginia	
	<u>Monthly Cost</u>	<u>Cost per Disqualification</u>	<u>Monthly Cost</u>	<u>Cost per Disqualification</u>	<u>Monthly Cost</u>	<u>Cost per Disqualification</u>
<u>Expanded County System</u>						
County Office Labor	\$228.66	\$1.03	\$268.83	\$1.03	\$66.95	\$1.03
<u>State System</u>						
State Agency Labor	\$2,436.25	\$10.97	\$318.67	\$1.22	\$396.18	\$6.10
Machine	\$184.90	\$0.83	\$100.00	\$0.38	\$39.33	\$0.61
Other Direct	\$8.88	\$0.04	\$10.44	\$0.04	\$2.60	\$0.04
Subtotal	\$2,630.03	\$11.84	\$429.11	\$1.64	\$438.10	\$6.74
County Office Labor	\$213.12	\$0.96	\$271.72	\$1.04	\$70.85	\$1.09
Other Direct	\$25.00	\$0.11	NA	NA	\$21.08	\$0.32
Subtotal	\$238.12	\$1.07	\$271.72	\$1.04	\$91.93	\$1.41
Total	\$2,866.60	\$12.91	\$699.76	\$2.68	\$530.03	\$8.15

- Other Direct Costs. Assumes a constant unit cost of \$0.04 per disqualification for the expense of disqualification reporting forms.

County Office Level

- Labor Cost. Assumed to equal county office unit labor cost estimates for the National system analysis.
- Other Direct Cost. Accounts for postage cost of mailing disqualification reports to the State Agency.

D2. Monthly Applicant Matching Costs

Exhibit D2 presents estimates for the monthly cost to conduct applicant matching activities in the three hypothetical systems.

Minimal County System

- Labor Cost. Total monthly cost assumes that a cost is incurred only when the casefile reference results in a match. Unit cost estimates for all three States are based on Virginia's National system applicant match costs due to the similarity of that activity.

Expanded County System

- Labor Cost. Unit cost estimates depend on the file being referenced. Casefile reference costs (New York and Virginia) follow the same approach used for the minimal county system. Disqualification file references (South Carolina and Virginia) are assumed to require the same amount of caseworker effort per reference as was estimated for Virginia National system applicant matches.

State System

State Agency Costs

- Labor Cost. For South Carolina, this cost is assumed to equal the National system cost. Virginia costs are estimated as the sum of that State's National system cost and the cost to maintain the South Carolina data base.
- Machine Cost. Estimates are based on South Carolina National system costs. To account for the smaller data base, however, State system costs assume 30 percent of that cost is fixed and 70 percent varies directly with the size of the file.
- Other Direct Cost. Accounts for the cost to distribute reports to county offices. Since South Carolina state system references are conducted through an on-line communication with the data base, these costs apply to Virginia only.

Exhibit D2

Hypothetical System

Monthly Applicant Matching Cost Summary

	New York		South Carolina		Virginia	
	<u>Monthly Cost</u>	<u>Cost/100 References</u>	<u>Monthly Cost</u>	<u>Cost/100 References</u>	<u>Monthly Cost</u>	<u>Cost/100 References</u>
<u>Minimal County System</u>						
County Office Labor	\$108.27	\$0.44	\$21.20	\$0.44	\$21.56	\$0.44
<u>Expanded County System</u>						
County Office Labor	\$108.27	\$0.44	\$17,992.73	\$73.27	\$53.37	\$1.09
<u>State System</u>						
State Agency Labor	NA	NA	\$382.40	\$1.56	\$180.96	\$3.68
Machine	NA	NA	\$53.67	\$0.22	\$49.60	\$1.01
Other Direct	NA	NA	NA	NA	\$112.80	\$2.29
Subtotal	\$0.00	\$0.00	\$436.07	\$1.78	\$343.35	\$6.98
County Office Labor	\$108.27	\$0.44	\$1,046.25	\$4.28	\$59.77	\$1.22
Total	\$108.27	\$0.44	\$1,482.33	\$6.06	\$403.13	\$8.20

County Office Costs

- Labor Cost. The unit cost to reference the disqualification file in South Carolina and Virginia equals the National system unit costs in those States. Case file reference costs are based on the same approach described for applicant match activities in the other two hypothetical systems.

D3. Monthly Penalty Reference Costs

The monthly costs associated with referencing disqualification information when assigning penalties are presented in Exhibit D3.

Minimal County System

- Labor Cost. Case file references in all three States are assumed to require approximately 15 minutes of claimswoker time if a match occurs. No cost is incurred if the reference does not yield a match.

Expanded County System

- Labor Cost. As with the minimal county system, case file references (New York and Virginia) are assumed to incur a cost only when the reference yields a valid hit. When a valid hit occurs, it is assumed to require approximately 15 minutes of claimswoker time. South Carolina references to the disqualification file require a special effort and incur a cost regardless of the outcome of the reference. Valid hits are assumed to require 15 minutes of claimswoker time; non-hits are assumed to require 5 minutes.

State System

State Agency Cost

- Labor Cost. South Carolina cost is assumed to equal the National system cost for this activity. New York and Virginia costs are not applicable since the disqualification file is not used for penalty assignment purposes.
- Machine Cost. Similarly, this component is only applicable in South Carolina. Machine cost estimates are based on National system costs, adjusted according to the same factor used for State system applicant matching machine costs.

County Office Cost

- Labor Cost. References to the disqualification file (South Carolina) are now assumed to only incur a cost when a match occurs. No cost for non-matches is assumed since this activity requires no special effort from claimswokers. Estimated unit costs equal the levels assumed in the expanded county system.

Exhibit D3

Hypothetical System

Monthly Penalty Reference Cost Summary

	New York		South Carolina		Virginia	
	<u>Monthly Cost</u>	<u>Cost/100 References</u>	<u>Monthly Cost</u>	<u>Cost/100 References</u>	<u>Monthly Cost</u>	<u>Cost/100 References</u>
<u>Minimal County System</u>						
County Office Labor	\$12.13	\$5.46	\$14.26	\$5.46	\$3.55	\$5.46
<u>Expanded County System</u>						
County Office Labor	\$12.13	\$5.46	\$296.15	\$113.47	\$3.55	\$5.46
<u>State System</u>						
State Agency Labor	NA	NA	\$318.67	\$122.09	NA	NA
Machine	NA	NA	\$44.73	\$17.14	NA	NA
Other Direct	NA	NA	NA	NA	NA	NA
Subtotal	NA	NA	\$363.39	\$139.23	NA	NA
County Office Labor	\$12.13	\$5.46	\$8.72	\$3.34	\$3.55	\$5.46
Total	\$12.13	\$5.46	\$372.12	\$142.57	\$3.55	\$5.46

D4. Monthly Caseload Matching Costs

Caseload matching activities would only be conducted in the New York and South Carolina state systems. The estimated costs for these activities are presented in Exhibit D4.

State Agency Cost

- Labor Cost. These costs are assumed to equal levels estimated for caseload match activities in the New York and South Carolina National systems.
- Machine Cost. As with other state system machine cost estimates, caseload match machine costs equal the national system cost adjusted to reflect the smaller file size.
- Other Cost. Accounts for the cost to distribute reports to county offices.

County Office Cost

- Labor Cost. Equals National system unit cost to perform actions against clients matching the disqualification file.