
TELECOMMUNICATIONS
FCS08-0001-2000



Snohomish County
Performance Audit Division

Final Report

Issued to:

Performance Audit Committee

May 1, 2001

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Performance Audit Division



Snohomish County
Auditor's Office
Performance Audit Division

Date: May 1, 2001
To: Performance Audit Committee
From: Dean Ritchhart
Subject: Telecommunications (FCS08-0001-2000)

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This report presents the results of our audit on Snohomish County's telecommunications policies and procedures being managed by Information's Systems Telephone Services Division. The purpose of the project was to "perform a standard telecommunications audit to determine if County is receiving lowest tariffs and rates offered and determine if billings reflect actual equipment in place and usage's".

Overall, the methodology Snohomish County uses to allocate costs of services to County agencies is fair and reasonable. The Telephone Services Division's internal management controls of standard installation costs for additional lines or equipment, and oversight of equipment inventory and maintenance practices appear to be adequate. However, during the 12-month review period, saving of \$20,000 could have been achieved by better dissemination of County telecommunication policies and procedures.

We made four recommendations for improvements to the County's telecommunication's policies and procedures, Telephone Service's departmental management controls, and closer communication with Verizon, our primary telecommunications provider. Telephone Services agreed with our recommendations and has or is in the process of implementation.

We wish to acknowledge the efforts Tim Coogan, Manager of Telephone Services Division and his staff. The audit review was lead by Martin T. Standel and was assisted by Steve Torrence.

Dean L. Ritchhart
Performance Audit Manager



Executive Summary

As an ongoing process, the Performance Audit Division (PAD) conducts risk assessments to identify and prioritize potential areas for review which, if approved by the Performance Audit Committee (PAC), are subsequently incorporated in our annual audit plan. During its regularly scheduled PAC meeting (April 2000) the high-risk telecommunications area was presented to the Committee for consideration.

Telecommunications was considered high risk since it is one of the County's largest operating expenses with annual costs in excess of \$850,000. Also, telecommunications is rapidly changing. Beepers, cell phones, Internet access, video conferencing, and many more telecommunications services are commonly being demanded today. Because of this, Snohomish County government is looking to develop e-government solutions (tax payments and licensing on line, electronic documents, etc.) to help improve and reduce the cost of government services for its citizens. Telecommunications is helping make effective change in today's government possible, and because of its overall importance, it merited an in-depth review.

This review was limited to telecommunications as supervised by the Telephone Services Division within the County's Information Services Department. The department is responsible for "...the County's telecommunications systems, network and wiring plant." This review did not consider cell telephones and outside telephone services and costs, since those areas are not under Division supervision.

ORGANIZATIONAL BACKGROUND

Snohomish County's Information Services Department provides services through seven separate Divisions. The Division's staffing level for the 2001 adopted budget is 86.5, of which 5.0 are assigned to Telephone Services.

The Telephone Services Division is responsible for all telecommunication needs for the County campus and various leased facilities. During 2000, Telephone Services developed techniques to limit adding PBX to the County network, by using existing equipment to support needed expansion. In addition, they installed mini-remote sites to link the Sheriff's two precinct offices to the existing PBX system and provided support to enable the County's 911 system to identify incoming callers.

TELECOMMUNICATION COSTS

Primary telecommunication costs are from Verizon, Network ACI and the State of Washington's SCAN, and all fall under Telephone Services Division supervision. Verizon is the County's main telecommunication provider of trunk lines, network, and local and long distance services. They also provide the Division an E-Solutions bill analysis software program to help them analyze monthly bills. Network ACI provides incoming 800-number calling services, and SCAN is a billing agency of the State of Washington's Department of Information Services.

For August 1999 through July 2000 (12 months), Verizon, ACT and SCAN billings exceeded \$850,000 dollars. These expenses do not include cell phone usage or costs.

Questions, Risk, Objectives, Scope, and Approach

The following section outlines the PAD process used to conduct this telecommunications review.

Authority to review telecommunications was through PAC approval of a submitted project. Upon approval, the project was incorporated into the annual Division audit plan. A more detailed risk assessment was performed, along with development of a detailed telecommunications audit plan, which included scope and methodology. The audit goal was to develop a plan that ultimately answered questions identified by the PAC during its project approval process.

A. AUDIT COMMITTEE QUESTIONS

- Is the County paying only for equipment it is using?
- Are there tariffs, rate schedules, or services that could be more cost beneficial?
- Are customers generally satisfied with the service provided by the provider?
- Is the DIS interfund cost recovery schedule fair and equitable to County customers?

RISK ASSESSMENT

Risk Assessment is an audit responsibility and is the act or practice of identifying risk drivers and their magnitude. It requires auditors to review and identify risks that may adversely affect a department or organization. The risk assessment process is a disciplined approach that enhances the audit process by identifying, analyzing, and

assessing the likelihood of risk occurrence and consequences; estimating an organization's risk exposure and possible impacts; and determining an acceptable risk level. As a pre-audit analysis component, risk assessment uses previous audits and planning assessments to rank a department's or organization's risk impact.

Our pre-project Telecommunications risk assessment was deemed high.

- Telecommunications is one of the County's largest operating expenses.
- Due to billing complexity, the system has strong opportunity for misuse.
- Due to single billing from Verizon (GTE), there is potential for limited internal controls since, unless they're requested, individual departments and or their divisions don't receive specialized reports (E-Solutions) or their own unique bills to review.

AUDIT OBJECTIVES & SCOPE

Audit objectives were to:

- Review current telecommunications agreements (Landline).
- Evaluate tariff, rate and equipment options.
- Test current charges to determine if billings are accurate.

The audit's scope was August 1999 through July 2000, a 12-month period for which bills could be reviewed.

APPROACH

Telecommunications is a critical government and business service. Those services typically have separate departments or divisions who are responsible for telecommunications infrastructure operations and management. Our audit program was designed to focus on the County's telecommunications infrastructure.

Snohomish County traditionally needed and depended on extended telecommunications to provide necessary services. Associated with these needs/dependence are large dollar expenditures, requiring well-developed and effective internal controls. Our audit program looked at the County's financial and technical controls. The control objectives and standards of the Information Systems Audit and Control Association (ISACA) and Institute of Internal Auditors (IIA) were incorporated into the test design. Finally, we considered relevant local and governmental regulations.

Our approach was to perform a standard telecommunications audit. After reviewing several standardized telecommunications audit programs, we selected and modified a program written by the US Army Audit Agency for our specific audit needs. The audit

program's ultimate objective was to determine if Snohomish County was receiving the lowest tariffs and rates offered, and if billings reflected actual billed equipment in place.

The audit scope was selected because we could obtain computer files (CDs) provided by Verizon of the County's monthly billings, and Telephone Services could provide us a copy of Verizon's E-Solutions billing software. Using E-Solutions and Enable, we selected and analyzed the County's Verizon bills, and completed various audit program requirements.

Findings

In general, the methodology Snohomish County uses to allocate costs of services to County agencies is fair and reasonable. The Telephone Services Division's internal management controls of standard installation costs for additional lines or equipment, and oversight of equipment inventory and maintenance practices appear to be adequate. However, we noted areas where better dissemination of County telecommunication policies and procedures would have resulted in the County saving \$20,000 during the 12-month review period.

These charges include County's costs for trunk and network lines, base monthly charges per telephone, new installations, and having the County listed in the telephone directory. Charges also included costs for long distance, directory assistance, credit card calls and special telephone services. **Costs charged by providers other than Verizon resulted in higher costs for the same service.** Our review's main concern was to insure the County is paying correct rates for services contracted and assess if only legitimate service costs were included.

The County's internal controls and the Department's management oversight of "Person to Person, and Third Party Numbers" usage is deemed adequate. Of the 74,779 long distant calls made during the review period, 14 calls were Person to Person and 3 calls were Third Party. Total costs of these calls was less than \$200 or 0.4 percent. However, we did identify cost savings in the Credit Card (Telephone Calling Cards) and Operator Assistance call areas.

CREDIT CARD CALLS

It is County policy to issue telephone-calling cards to individuals who need them to perform their assigned tasks. Currently, over 350 Verizon calling cards are issued to

various County employees. Some of these cards are old and do not provide the user current instructions on proper use. In addition, the County has not had a mandatory card recall and reissue for security and cost reasons. This resulted in the County being charged avoidable costs of \$14,194.

Telecommunication industry deregulation resulted in intense competition and overall, lower charges. However, it also changed the rules of who and what can be charged. ***When a County employee makes a calling card call without dialing into Verizon's network, and the call is made on other provider's equipment, charges associated to that call can be significantly higher.*** Telephone Services initiated a calling card exchange during our review. However, due to concerns regarding the pin number being printed on the new calling card, Telephone Services canceled the recall and requested bids from other potential providers. Telephone Services recently reissued new Verizon telephone cards.

OPERATOR ASSISTANCE CALLS

During the review period, County employees made 517 long distance, operator assisted calls. While these calls represent only 0.7 percent of all long distant calls made, their cost per minute was \$.98 cents versus \$.14 cents for direct-dialed calls. If the calls had been direct dialed, the County could have saved \$2,173.

TELEPHONE FEATURES

A standard telecommunications audit step is to review various telephone features and evaluate them in terms of service and cost. Overall, Telephone Services and Verizon maintain a good working relationship and made tremendous strides in controlling communications features, which can unnecessarily increase the County's telecommunication expense. Verizon was extremely helpful during our review and worked with the County to minimize expenditures. ***However, like most service organizations, Verizon will provide assistance if they are asked, but will not volunteer assistance.***

During talks with Verizon, we discussed methods to review County billings through their "E-Solutions Software," and they provided useful insights. While reviewing one report with Verizon, it was noticed the County was being charged \$5.00 per line per month on 51 separate phones for "Toll Free" 800 numbers no longer needed because the County has its own 800-telephone service. Verizon offered to take corrective action during our meeting, but we informed them that as Performance Auditors we did not have the

authority to request they make the corrections, but asked them to contact the Telephone Services manager; the matter was resolved.

We also identified one Public Works line with a monthly Internet fee of \$19.95. We contacted the user. They didn't know the charge was being billed and they are connected to the County's internal and external Internet. We informed the Telephone Services manger and were told the matter would be resolved.

SURVEY

To help in audit program development, a standard audit procedure is to conduct a preaudit survey of affected departments. We performed this function by developing a 20-question survey. The survey was sent to each Elected Official and Department Director on December 8, 2000 with responses requested by January 12, 2001. We received back 23 individual responses ranging from Department Directors to individual staff. While the responses are not statistically significant, they allowed some insight to the users' overall feelings. (See Attachment 1).

Overall we feel County employees are generally satisfied (91.3% of comments were favorable) with their current telecommunication services. However, only 39.1% indicated they are familiar with County policies and procedures.

Conclusions

GENERAL CONCLUSIONS

Telecommunication's distribution methods, pricing, and practices have undergone revolutionary changes over recent years. Where management internal controls and oversight used to primarily focus on minimizing costs associated with non-productive telephone use (long distance, unneeded features and improper use), current technology allows automatic review by individual telephone number of many of these concerns. The cost of labor intensive management oversight is now seldom worth the cost.

In the current telecommunications environment, it may cost less to call across the country than across the street, and specialized telephone features, once expensive options, are now included in basic prices. Also, many rate schedules (tariffs) have been reduced or eliminated, and there are only two primary tariffs, one for business and another for residential use. However, there has also been an explosion of the means,

and associated needs and use of telecommunications. We now use computers to transmit data and e-mails, and are in the early planning stages for development of e-commerce. Hence, while telecommunication costs per service are dropping, overall telecommunications costs based on an increasing use of varied applications keep rising. Since telecommunications is becoming more critical and costs continue to rise, management control is necessary.

Overall, County Telephone Services Division management oversight and internal controls are adequate. The Division performs assigned functions with professionalism and strives to be cost effective and efficient. The Division monitors County telephone use and costs, and blocks access where inappropriate use is found or when services are no longer needed. Areas where increased oversight could improve the Division's monitoring capabilities and reduce County costs overall are addressed in our recommendations.

AUDIT COMMITTEE QUESTIONS

Is the County paying only for equipment it is using?

Per our survey of telecommunications users, 96% of all respondents stated they are not paying for equipment not being used. However, a review of telephone lines without activity indicates some unused lines are being paid for. Departments routinely pay for budgeted equipment and for some dormant lines, since when authorized full-time employee positions are vacant, those lines are not generally used.

Are there tariffs, rate schedules, or services that could be more cost beneficial?

No. Even though Snohomish County is classified a local government entity, it pays the standard business tariff. The only cost benefits are through volume and the number of individual lines, not through a preferential tariff.

Are customers generally satisfied with the service provided by the provider?

Per our survey, over 91% stated they were satisfied with their current service.

Is the DIS interfund cost recovery schedule fair and equitable to County customers?

Overall the cost recovery schedule is fair and equitable. However, per County Code and RCW's, the IS Department may set interfund rates higher than actual costs. Rates are set to cover projected and planned service improvements, and additional equipment and modifications due to departmental moves or expansions. Thus, stable departments with relatively fixed infrastructures somewhat subsidize Departments in constant change or growth.

Recommendations

Overall, Telephone Services performs their assigned tasks efficiently and professionally. However, over the year reviewed, the County could have saved \$20,000 through better dissemination of current telephone procedures and use policy. Recommendations include communication policies and procedures, departmental management controls, and IS expanded communication with our primary telecommunications provider (Verizon).

Recommendation 1: In order to limit excess charges for telephone credit card improper use, we recommend Telephone Services develop and provide current procedures to all telephone calling card holders. At a minimum, those procedures should include explicit directions regarding proper access.

Recommendation 2: We recommend Telephone Services develop training materials for Human Resources to be given to new Snohomish County employees regarding proper telephone equipment use.

Training materials should at least include areas where unnecessary costs can be eliminated such as using the Internet to look up numbers or addresses, and proper use of operators and director assistance.

Recommendation 3: We recommend Telephone Services periodically (routinely as needed) ask Verizon's assistance to specifically reduce the costs of equipment lines not being used, unnecessary telecommunication features (800 lines, etc), best available discounts, and etc.

In addition, we request Telephone Services review Public Work's single-line, monthly Internet charge.

Recommendation 4: We recommend Telephone Services consider periodic distribution of departmental telephone bills to all County Department managers.

Response

We discussed our recommendations with Telephone Services and they are in general agreement with our recommendations.



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I. Introduction

As an ongoing process, the Performance Audit Division conducts risk assessments to identify and prioritize potential areas for review which, if approved by the Performance Audit Committee (PAC), are subsequently incorporated in our annual audit plan. During its regularly scheduled PAC meeting (April 2000) several high-risk areas were presented to the Committee for consideration including telecommunications.

County telecommunications was considered high risk for several reasons. Telecommunications is one of the County's largest operating expenses with annual telecommunication expense in excess of \$850,000. Also, telecommunications is rapidly changing with more services being demanded. Beepers, cell phones, Internet access, video conferencing, and many more telecommunications services are common today. Because of this, Snohomish County government is looking toward e-government solutions (tax payments and licensing on line, electronic documents, etc.) to help improve and reduce the cost of current government services for its citizens. Telecommunications is a major key to making effective changes to today's government possible, and because of its overall importance, it merited an in-depth review.

This review was limited to telecommunications as supervised through the Telephone Services Division within the County's Information Services Department. This department is responsible for "...the County's telecommunications systems, network and wiring plant." This review did not consider cell telephones and outside telephone services and costs, since these areas are not under Division supervision.

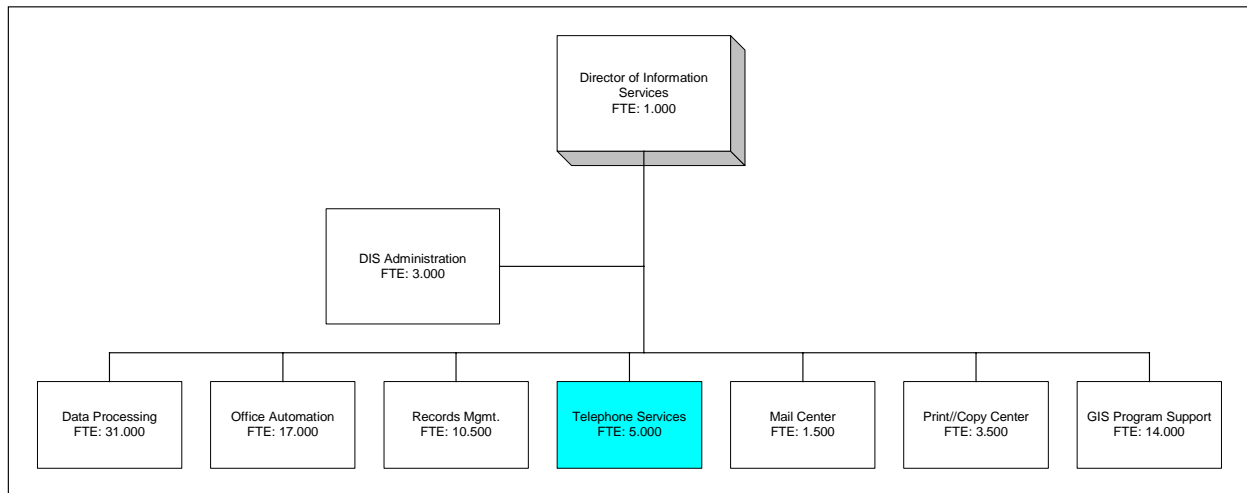
A. ORGANIZATIONAL BACKGROUND

Snohomish County's Information Services Department provides their services through seven separate Division programs including:

- Data Processing - Technical system, application support and project office activities
- Office Automation - Assist County departments in automation technologies
- Records Management - County records retention
- Telephone Services - Manages County telecommunications
- Mail Center - County mail service
- Print/Copy Center - Administers the County's printing and photocopying services
- GIS Program Support - Provides the County's GIS service and support

Following is Information Service's organizational chart.

Exhibit 1 - Information Services Organization Chart



The Department staffing level full-time equivalent (FTE) for the 2001 adopted budget is 86.5, of which 5.0 are assigned to Telephone Services.

The Telephone Services Division is responsible for all telecommunication needs for the County campus and various leased facilities throughout the County. During 2000, Telephone Services developed techniques to limit adding PBX to the County network, by using existing equipment to support needed expansion. In addition, they installed mini-remote sites, which linked the Sheriff's two precinct offices to the existing PBX system. They also provided support to enhance the County's 911 system to enable it to identify incoming callers.

Actual or adopted budget expenditures for the Division's past five years follow:

Exhibit 2 - Telephone Services Actual or Adopted Budget Expenditures and FTE

Actual/Budget	Year	Expenditures	FTE
Actual	1997	\$1,602,866	4
Actual	1998	\$1,668,616	4
Actual	1999	\$1,781,106	4
Adopted	2000	\$1,897,595	5
Adopted	2001	\$1,988,655	5

Source: Snohomish County Adopted Budgets (1999 - 2001)



B. TELECOMMUNICATION COSTS

The primary telecommunication costs, which fall under the supervision of the Telephone Services Division, are from Verizon, Network ACI and the State of Washington’s SCAN. Verizon is the County’s main telecommunication provider, and provide trunk lines, network, local and long distance services. They also provide the Telephone Services Division an E-Solutions bill analysis software program to help Telecommunications analyze monthly bills. Network ACI provides incoming 800-number calling services, and SCAN is a billing agency of the State of Washington Department of Information Services.

Exhibit 3 - Telecommunication Charges

Snohomish County
Telecommunication Charges
August 1999 - July 2000

Month	Verizon	ACT (800)	Totals
August-99	\$ 65,765.50	\$ 1,738.62	\$ 67,504.12
September-99	\$ 59,264.52	\$ 1,845.14	\$ 61,109.66
October-99	\$ 58,756.18	\$ 1,692.40	\$ 60,448.58
November-99	\$ 59,815.05	\$ 1,778.46	\$ 61,593.51
December-99	\$ 58,044.98	\$ 1,477.69	\$ 59,522.67
January-00	\$ 63,267.46	\$ 1,777.69	\$ 65,045.15
February-00	\$ 70,730.55	\$ 1,508.24	\$ 72,238.79
March-00	\$ 69,542.67	\$ 1,506.08	\$ 71,048.75
April-00	\$ 67,486.74	\$ 1,895.39	\$ 69,382.13
May-00	\$ 67,750.81	\$ 1,867.53	\$ 69,618.34
June-00	\$ 65,614.63	\$ 1,598.54	\$ 67,213.17
July-00	\$ 65,828.38	\$ 1,945.17	\$ 67,773.55
Totals	\$ 771,867.47	\$ 20,630.95	\$ 792,498.42

Source: Verizon and Network ACI Monthly Billings

The above billings show Verizon and ACT costs for the 12-month period August 1999 through July 2000. SCAN average monthly billings for that period were about \$5,000 per month or \$60,000 annually. Thus, total telecommunication costs during the review period (excluding outside and cell telecommunication costs) exceeded \$850,000 dollars.

II. Questions, Risk, Objectives, Scope, and Approach

The following section outlines the process used by the Performance Audit Division to conduct this Telecommunications review.



Authority to review telecommunications was through Performance Audit Committee approval of a submitted project. Upon approval, the project was incorporated into the annual Division audit plan. A more detailed risk assessment was performed, along with development of a detailed telecommunications audit plan, which included scope and methodology. The audit goal is to develop a plan that ultimately answers questions identified by the Performance Audit Committee during its project approval process.

A. AUDIT COMMITTEE QUESTIONS

- Is the County paying only for equipment it is using?
- Are there tariffs, rate schedules, or services that could be more cost beneficial?
- Are customers generally satisfied with the service provided by the provider?
- Is the DIS interfund cost recovery schedule fair and equitable to County customers?

B. RISK ASSESSMENT

Risk Assessment is an audit responsibility and is the act or practice of identifying the risk drivers and their magnitude. It requires the auditor to review and identify risks that may adversely affect a department or organization. The risk assessment process requires a disciplined approach and enhances the audit process by identifying, analyzing, and assessing the likelihood of risk occurrence and consequences; estimating an organization's assessed risk exposure and possible impacts; and determining an acceptable risk level. As a component of pre-audit analysis, risk assessment uses previous audits and planning assessments to rank risk impact of a department or organization.

Our pre-project risk assessment for Telecommunications was deemed high for the following reasons:

- Telecommunications is one of the County's largest operating expenses.
- Due to billing complexity, the system has strong opportunity for misuse.
- Due to single billing from Verizon (GTE), there is potential for limited internal controls since, unless they're requested, individual departments and or their divisions don't receive specialized reports (E-Solutions) or their own unique bills to review.

C. AUDIT OBJECTIVES & SCOPE

Audit objectives were to:

- Review current telecommunications agreements (Landline).
- Evaluate tariff, rate and equipment options.
- Test current charges to determine if billings are accurate.

The audit's scope was a 12-month period for which bills could be reviewed. The period selected was August 1999 through July 2000.

D. APPROACH

Telecommunications is a critical service for government and business entities. These entities typically have separate departments or divisions whose sole purpose is the responsibility for telecommunications infrastructure operations and management. Our audit program was designed to maintain its focus on our County government's large telecommunications infrastructure.

Organizations such as Snohomish County traditionally greatly need and depend on extended telecommunications to provide necessary services. Associated with these needs/dependence needs are large dollar expenditures, which necessitate well-developed and effective internal controls. Our audit program was designed to look at the financial and technical controls employed by the County. The control objectives and standards of Information Systems Audit and Control Association (ISACA) and the Institute of Internal Auditors (IIA) were incorporated into the test design. Finally, we considered relevant local and governmental regulations.

Our approach was to perform a standard telecommunications audit. After reviewing several standardized telecommunications audit programs, we selected a program written by the US Army Audit Agency as our model. That program was modified to fit our specific needs. The audit program's ultimate objective was to determine if Snohomish County was receiving the lowest tariffs and rates offered, and determine if billings reflected actual equipment in place and its usage.

The audit scope was selected because we could obtain computer files (CDs) provided by Verizon of the County's monthly billings. Telephone Services provided us a copy of Verizon's E-Solutions billing software. Using E-Solutions and Enable, we were able to

select and analyze the County's Verizon bills, and complete various audit program requirements.

III. Auditing Standards, & Public Information

A. AUDITING STANDARDS, AUTHORITY

Snohomish County Code (Chapter 2.700.020) states all performance audits and or reviews are conducted in accordance with government auditing standards. Per Division policy, this review adhered to Government Accounting Office Standards concerning procedures to develop findings and for communicating results with responsible managers and officials.

According to GAO Standards, a finding or set of findings is complete to the extent the objectives are satisfied and the report clearly relates those objectives to the finding elements. Unlike a financial audit finding, a review finding is a statement a condition exists. This may not necessarily imply a problem or some corrective action must be implemented.

We conducted our review in accordance with generally accepted auditing standards and the Government Auditing Standards issued by the Comptroller General of the United States (1994 Revision). Those standards required we plan and perform the review to obtain reasonable assurance the Telecommunications Division provides critical financial management and operational controls and oversight.

B. PUBLIC INFORMATION

This report is intended initially to provide information to the County Executive, County Council, and to Department Directors. All of this report is a matter of public record and distribution should not be limited. **However, confidential information is not public record and will not be distributed.** Information extracted from this report may serve as a method to disseminate information to the public as a reporting tool to help citizens assess government operations. All audit division reports are reviewed internally by responsible managers and officials, and their formal written responses are incorporated into final reports in accordance with Performance Audit Committee policy and government auditing standards (GAO Standard 7.38).



IV. Findings

In general, the methodology Snohomish County uses to allocate its cost of services to County agencies is fair and reasonable. Snohomish County's Telephone Services Division's internal controls for management of standard installation costs for additional lines or equipment, as well as oversight of equipment inventory and maintenance practices appear to be adequate. However, we noted several areas where better dissemination of County telecommunication policies and procedures would have resulted in savings to the County of \$20,000 during the twelve-month review period.

Exhibit 4 - Savings

	Savings
Calling Cards	\$ 14,194
Operator Assistance	\$ 2,173
Toll Free 800 Service	\$ 3,348
Internet	\$ 262
Total Savings	\$ 19,977

Source: Verizon and Network ACI Monthly Billings

Our review was based on a sample 12-month billing period of August 1999 through July 2000. During that period, the County incurred telecommunication charges from Verizon in the amount of \$771,867.

Exhibit 5 - Verizon Telecommunication Charges by Provider

Verizon	\$ 747,166.67
ATT	\$ 17,747.00
ZPDI	\$ 2,881.91
MCI	\$ 1,762.99
Sprint	\$ 1,466.05
ILD	\$ 546.94
OAN	\$ 240.53
USBI	\$ 54.21
Qwest	\$ 1.17
Total all Charges	\$ 771,867.47

Source: Verizon and Network ACI Monthly Billings

These charges included the County's costs for its trunk and network lines, base monthly charge per telephone, new installations, and having the County listed in the telephone directory. Charges also included costs for long distance, directory assistance, credit



card calls and special telephone services. **Costs charged by providers other than Verizon resulted in higher costs for the same service.**

Our review's main concern was to assure the County is paying correct rates for services contracted and to assess if only legitimate service costs are included. To better review long distance service costs, they were broken down by type:

Credit Card Usage	Direct Dialed
Operator Assistance	Person to Person
Third Party Number	Verify/Interrupt

Exhibit 6 - Long Distant Service Charges

Description	Total Calls	No. Minutes	Amount
Credit Card	8,848	36,439.8	\$ 25,428.21
Direct Dialed	65,354	164,191.6	\$ 23,300.94
Operator Assist	517	2,363.1	\$ 2,317.20
Person to Person	14	134.4	\$ 97.92
Third Number	3	94.0	\$ 87.62
Verify/Interrupt	40	5.1	\$ 68.20
Adjustments	3	3.0	\$ (29.00)
Totals	74,779	203,231.0	\$ 51,271.09

Source: Verizon and Network ACI Monthly Billings

The County's internal controls and the Department's management oversight of "Person to Person, and Third Party Numbers" usage is deemed adequate. Of the 74,779 long distant calls made during the review period, only 14 calls were Person to Person and 3 calls were Third Party. Total costs associated to these calls was less than \$200 or 0.4 percent.

However, we did identify in Credit Card (Telephone Calling Cards) and Operator Assistance call areas where there were cost savings.

A. CREDIT CARD CALLS

It is County policy to issue telephone-calling cards to individuals who need them to perform their assigned tasks. Currently, over 350 Verizon calling cards are issued to various County employees. Some of these cards are old and do not provide the user current instructions on proper use. In addition, the County has not had a mandatory exchange for security and cost reasons. This resulted in costs of \$14,194 charged to the County, which could have been avoided.



Exhibit 7 - Excess Provider Charges

Provider	Excess Cost	Taxes	Total Savings
AT&T	\$ 9,078.04	\$ 853.34	\$ 9,931.37
ILD	\$ 379.38	\$ 35.66	\$ 415.04
MCI	\$ 749.07	\$ 70.41	\$ 819.48
OAN	\$ 148.37	\$ 13.95	\$ 162.31
Sprint	\$ 749.76	\$ 70.48	\$ 820.24
ZPDI	\$ 1,870.18	\$ 175.80	\$ 2,045.97
Totals	\$ 12,974.79	\$ 1,219.63	\$ 14,194.43

Source: Verizon and Network ACI Monthly Billings

Deregulation in the telecommunication industry resulted in intense competition and overall lower charges. However, at the same time it changed the rules of who and what can be charged. **When a County employee makes a calling card call without dialing into Verizon's network, and the call is made on other provider's equipment, charges associated to that call can be significantly higher.** Telephone Services initiated a calling card exchange during our review. However, due to concerns regarding the pin number being printed on the new calling card, Telephone Services canceled the recall and requested bids from other potential providers. Telephone Services has recently reissued new Verizon telephone cards.

B. OPERATOR ASSISTANCE CALLS

During the review period, County employees made a total of 517 long distance calls using operator assistance. While these calls only represent 0.7 percent of all long distant calls made, their cost per minute was \$.98 cents per minute versus \$.14 cents per minute for direct dialed calls. If these calls had been direct dialed, the County could have saved \$2,173.

Exhibit 8 - Operator Assistance Call Savings

	No. of Calls	No. of Minutes	Savings/Minute	Savings	Taxes	Total
Operator Assistance	517	2,363.1	\$ 0.84	\$ 1,986.37	\$ 186.72	\$ 2,173.08

Source: Verizon and Network ACI Monthly Billings

C. TELEPHONE FEATURES

A standard audit step for telecommunication audits is to review various telephone features and evaluate them in terms of service and cost. Overall, Telephone Services and Verizon maintained a good working relationship and made tremendous strides in

controlling the various features, which can unnecessarily increase the County's telecommunication expense. Verizon was extremely helpful during our review and worked with the County to minimize its expenditures. ***However, like most service organizations, Verizon will provide all the assistance asked of them, but they will not volunteer assistance.***

During discussions with Verizon, we discussed methods and ways to review our billings through their "E-Solutions Software". They were helpful and provided us useful insights. In fact, while we reviewed one type of report, Verizon noticed on 51 separate phones the County was being charged for "Toll Free" 800 numbers no longer needed. These charges were billed to the County at a cost of \$5.00 per line per month, even though the County has its own separate 800-telephone service. Verizon offered to take corrective action during our meeting. We informed them as Performance Auditors we do not have the authority to request they make the corrections, but asked them to contact the Telephone Services manager; the matter was resolved.

Exhibit 9 - Savings from Canceling Unnecessary Toll Free, 800 Service

No. of Lines	Annual Cost	Savings	Taxes	Total Savings
51	\$ 60.00	\$3,060.00	\$287.64	\$ 3,347.64

Source: Verizon and Network ACI Monthly Billings

We also identified one Public Works line with a monthly Internet fee of \$19.95. We contacted the user. They didn't know the charge was being billed and they are connected to the County's internal and external Internet. We informed the Telephone Services manager and were informed the matter would be resolved.

Exhibit 10 - Savings from Canceling Unnecessary Internet Fee

No. of Lines	Annual Cost	Savings	Taxes	Total Savings
1	\$ 239.40	\$ 239.40	\$ 22.50	\$ 261.90

Source: Verizon and Network ACI Monthly Billings

D. SURVEY

A standard audit procedure is to conduct a preaudit survey of effected departments to help in audit program development. We performed this function by developing a 20-question survey broken down into:

- Existing Credit Card/Telephone Service

- Cell Telephone Service
- Telecommunications Improvements

The survey was sent to each Elected Official and Department Director on December 8, 2000 with responses requested by January 12, 2001. We received back 23 individual responses ranging from Department Directors to individual staff. While the responses are not statistically significant, they allowed some insight to the users' overall feelings.

While the complete survey could be reviewed (See Attachment 1), overall we feel County employees are generally satisfied (91.3% of comments were favorable) with their current telecommunication services. However, only 39.1% indicated they are familiar with County policies and procedures.

Respondents indicated they had no telecommunications equipment not being used, (95.65% said no while 4.35% indicated they did not know). The respondents indicated they do review their monthly bill (73.91%), but only 17.39% indicated they used an access number to make a calling card call.

While the Telephone Services group does not supervise cell phone usage, providers and services, nearly 50% (47.83%) of survey respondents stated they did not know if their provider was the least expensive in meeting their need.

V. Conclusions

A. GENERAL CONCLUSIONS

Telecommunications and its distribution methods, pricing, and practices have undergone revolutionary changes over recent years. Where management internal controls and oversight used to primarily focus on minimizing costs associated with non-productive telephone use (long distance, unneeded features and improper use), current technology allows automatic review by individual telephone number of many of these concerns. The cost of labor intensive management oversight is now seldom worth the expense.

In the current telecommunications environment, it may often cost less to call across the country than across the street, and specialized telephone features, once expensive options, are now included in the basic price. Also, many rate schedules (tariffs) have



been reduced or eliminated, and there are only two primary tariffs, one for business and another for residential use. However, at the same time there has been an explosion of the means, and associated needs and use of the telecommunications system. We now use computers to transmit data and e-mails over it, and are in the early planning stages for development of its use for E-Commerce. Hence, while telecommunication costs per service are dropping, actual telecommunications costs based on increased use for many applications keep rising. Since telecommunications is becoming more critical and costs continue to rise management control is necessary.

Overall, County management's oversight and internal controls of the Telephone Services Division are adequate. The Division performs their assigned functions with professionalism and strives to be cost effective and efficient. The Division monitors County telephone use and costs, and blocks access where inappropriate use is found or when services are no longer needed. Areas where increased oversight could improve the Division's monitoring capabilities and reduce overall County costs are addressed in our recommendations.

B. AUDIT COMMITTEE QUESTIONS

Is the County paying only for equipment it is using?

Per our survey of telecommunications users, 96% of all respondents stated they are not paying for equipment not being used. However, a review of telephone lines without activity indicates some unused lines are being paid for. Departments routinely pay for budgeted equipment and for some dormant lines, since authorized full-time employee positions are vacant and the lines are not generally used.

Are there tariffs, rate schedules, or services that could be more cost beneficial?

No. Even though Snohomish County is classified a local government entity, it pays the standard tariff associated with businesses. The only cost benefit is through volume and the number of individual lines, and not through a preferential tariff.

Are customers generally satisfied with the service provided by the provider?

Per our survey, over 91% stated they were satisfied with their current service.

Is the DIS interfund cost recovery schedule fair and equitable to County customers?

Overall the cost recovery schedule is fair and equitable. However, per County Code and RCW's, the IS Department may set their interfund rates higher than actual costs. The rates are set to cover projected and planned service improvements, and additional



equipment and modifications due to departmental moves or expansions. Thus, stable departments with relatively fixed infrastructures are in some part subsidizing Departments in constant change or growth.

VI. Recommendations

Overall Telephone Services performs their assigned tasks efficiently and professionally. However, through better dissemination of current telephone procedures and use policy, the County could have saved \$20 thousand dollars over the year of our review. Our recommendations include communication policies and procedures, departmental management controls, and IS expanded communication with our primary telecommunications provider (Verizon).

Recommendation 1: In order to limit excess charges for telephone credit card improper use, we recommend Telephone Services develop and provide current procedures to all telephone calling card holders. At a minimum, those procedures should include explicit directions regarding proper access.

Recommendation 2: We recommend Telephone Services develop training materials for Human Resources to be given to new Snohomish County employees regarding proper telephone equipment use.

Training materials should at least include areas where unnecessary costs can be eliminated such as using the Internet to look up numbers or addresses, and proper use of operators and director assistance.

Recommendation 3: We recommend Telephone Services periodically (routinely as needed) ask Verizon's assistance to specifically reduce the costs of equipment lines not being used, unnecessary telecommunication features (800 lines, etc), best available discounts, and etc.

In addition, we request Telephone Services review Public Work's single-line, monthly Internet charge.

Recommendations 4: We recommend Telephone Services consider periodic distribution of departmental telephone bills to all County Department managers.



VII. Response

We discussed our recommendations with Telephone Services and they are in general agreement with our recommendations.

SNOHOMISH COUNTY
Department of Information Services
3001 Oakes Ave., Everett, WA 98201

MEMORANDUM

TO: Martin T. Standel

FROM: Timothy P. Coogan, Administrative Manager

DATE: April 27, 2001

SUBJ: Review of Telecommunications (FCS08-001-2000) Final Draft Report

Thank you for the opportunity to review the draft of your Telephone Services Findings Report dated April 20, 2001. I appreciate the opportunity to discuss the Telephone Services operation with the Performance Audit Staff during their review, and I generally agree with the findings and recommendations presented in your report. A comment on how the reported \$20 thousand dollar expense compares with other organizations would be helpful.

Of the four recommendations presented, all of them are being implemented in various degrees.

Recommendation 1. The recent distribution of new telephone calling cards to telephone calling call holders has reduced the probability of excess charges. Service on the old cards was cancelled effective March 30, 2001. The new cards use an 800 number to access the telecommunication carrier serving the County and this direct access severely curtails access problems and excess charges associated with alternate telecommunication carriers. Cardholders following directions contained on the new telephone calling card should effectively eliminate the problems that prompted this recommendation.

Recommendation 2. Existing telephone training material on phone features will be expanded to incorporate appropriate tips on eliminating or minimizing unnecessary costs involving operator and directory assistance. The material will be made available to Human Resources next month for distribution to new employees

Recommendation 3. Telephone Services has a continuing program with Verizon to review county sites for potential savings. Service audits are a multi-year effort. Joint County and Verizon teams conduct on site audit visits of Verizon service demarcation points and billing record examination. The audits produce credits for billing errors and revised circuit service requests to either improve service or reduce County costs.

Recommendation 4. Telephone Services currently distributes to one County Department Manager a monthly departmental telephone billing report. The report is in addition to billing reports that accompany monthly advice of charge furnished all departments. The additional report is available upon request to all County Department Managers. All interested managers will be invited to ask Telephone Services for a similar report.

**Snohomish County
Telecommunications
Confidential Survey Results**

When answering this survey, please use the following scale and respond on a paper copy to the Performance Audit Division, M/S 505. Circle the answer "best" describing your feelings regarding Snohomish County telecommunications issues and provide any comments your have below.

Strongly Disagree	Disagree	Partially Disagree	Neutral	Partially Agree	Agree	Strongly Agree	Don't Know N/A	Total
1	2	3	4	5	6	7	8	
← NO →				← YES →				

Existing Credit Card/Telephone Service(s)

1 My existing telecommunications service provides the capability(ies) I need.		1	1		2	12	7		23
2 I have used County telephone credit cards for calling.	12	3		2		3	2	1	23
3 I know the County policies for using County telephone credit cards.	6	3			1	3	5	5	23
4 I always us 10-digit calling procedures when using County telephone credit cards.	4	2		4		2	2	9	23
5 Monthly, I review my telecommunications bill and know how much my services cost me.	1			1	2	7	8	4	23
6 I have telecommunications support (modems, faxes, credit cards, etc.) I no longer use.	15	7						1	23
7 When my telecommunications equipment doesn't work, I know who to call.		2			2	4	14	1	23
8 When I call for telecommunications repair or service, I get prompt help.	1	2	2	1	2	8	7		23
9 If my service isn't fixed within an hour, I get an update on how long it will take to repair it.	1	2	1	6	4	5	3	1	23
10 I'm happy with my current telecommunications service.	2	3		1		7	8	2	23

Cell Telephone Service

	Yes	No	N/A					
11 I use a County cell phone for my weekly work. (If yes, please answer questions 12 – 15.)	14	8	1					23
12 I personally selected the cell phone program I use.	8	10	5					23
13 I worked with DIS telecommunications to select the cell phone program I use.	4	6		3	2	1	7	23

Verizon	Nextel	Air Touch	Voice Stream	AT&T	None
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14 My cell phone program provider is.	4	4	3	1	2		9	23
15 This is the cheapest cell phone program that meets my needs.				1		6	6	10

0	1	2	3	4	5	6	7+	Total
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16 I average this many cell phone calls each day.	9	4	1		1	1	1	6	23
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Telecommunications Improvements

17 I know who to contact to help me improve my telecommunications service(s).	2					6	12	3	23
18 I plan to make telecommunications changes in the next two years.	1	2	1	6	2	1	3	7	23
19 I have developed a future telecommunications plan.	2	1	1	11	2	1	1	4	23
20 I would like help developing a future telecommunications plan.	4		2	7		5	2	3	23

**Snohomish County
Telecommunications
Confidential Survey Results**

Existing Credit Card/Telephone Service(s)

- 1 My existing telecommunications service provides the capability(ies) I need.
- 2 I have used County telephone credit cards for calling.
- 3 I know the County policies for using County telephone credit cards.
- 4 I always use 10-digit calling procedures when using County telephone credit cards.
- 5 Monthly, I review my telecommunications bill and know how much my services cost me.
- 6 I have telecommunications support (modems, faxes, credit cards, etc.) I no longer use.
- 7 When my telecommunications equipment doesn't work, I know who to call.
- 8 When I call for telecommunications repair or service, I get prompt help.
- 9 If my service isn't fixed within an hour, I get an update on how long it will take to repair it.
- 10 I'm happy with my current telecommunications service.

	Sum of NO		Sum of YES		Sum of Do not Know		Totals
	Count	Percent	Count	Percent	Count	Percent	
1	2	8.70%	21	91.30%	0	0.00%	23
2	15	65.22%	5	21.74%	3	13.04%	23
3	9	39.13%	9	39.13%	5	21.74%	23
4	6	26.09%	4	17.39%	13	56.52%	23
5	1	4.35%	17	73.91%	5	21.74%	23
6	22	95.65%	0	0.00%	1	4.35%	23
7	2	8.70%	20	86.96%	1	4.35%	23
8	5	21.74%	17	73.91%	1	4.35%	23
9	4	17.39%	12	52.17%	7	30.43%	23
10	5	21.74%	15	65.22%	3	13.04%	23

**Snohomish County
Telecommunications
Confidential Survey Results**

Cell Telephone Service

11 I use a County cell phone for my weekly work. (If yes, please answer questions 12 – 15.)

Yes	No	N/A
14	8	1
8	10	5

% YES	% NO	% N/A
60.87%	34.78%	4.35%
34.78%	43.48%	21.74%

Total

12 I personally selected the cell phone program I use.

23

23

13 I worked with DIS telecommunications to select the cell phone program I use.

	Count	Percent
Yes	6	26.09%
No	10	43.48%
Don't Know	7	30.43%
Total	23	100.00%

14 My cell phone program provider is.

	Count	Percent
Verizon	4	17.39%
Nextel	4	17.39%
Air Touch	3	13.04%
Voice Stream	1	4.35%
AT&T	2	8.70%
None	9	39.13%
Total	23	100.00%

15 This is the cheapest cell phone program that meets my needs.

	Count	Percent
Yes	12	52.17%
No	0	0.00%
Don't Know	11	47.83%
Total	23	100.00%

16 I average this many cell phone calls each day.

	Count	Percent
0	9	39.13%
1	4	17.39%
2	1	4.35%
3	0	0.00%
4	1	4.35%
5	1	4.35%
6	1	4.35%
7+	6	26.09%
Total	23	100.00%

**Snohomish County
Telecommunications
Confidential Survey Results**

Existing Credit Card/Telephone Service(s)

- 17 I know who to contact to help me improve my telecommunications service(s).
- 18 I plan to make telecommunications changes in the next two years.
- 19 I have developed a future telecommunications plan.
- 20 I would like help developing a future telecommunications plan.

Sum of NO		Sum of YES		Sum of Do not Know		Totals
Count	Percent	Count	Percent	Count	Percent	
2	8.70%	18	78.26%	3	13.04%	23
4	17.39%	6	26.09%	13	56.52%	23
4	17.39%	4	17.39%	15	65.22%	23
6	26.09%	7	30.43%	10	43.48%	23