



**REPORT OF
THE
STATE AUDITOR**

**Beanpole Telecommunication
Project**

**Performance Audit
May 2002**

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This report contains the results of the performance audit of the Beanpole Telecommunication Project. The audit was conducted pursuant to Section 2-3-103, C.R.S., which authorizes the State Auditor to conduct audits of all departments, institutions, and agencies of state government. The report presents our findings, conclusions, and recommendations, and the responses of the Department of Local Affairs and the Division of Information Technologies.

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**STATE OF COLORADO
OFFICE OF THE STATE AUDITOR**

REPORT SUMMARY

**JOANNE HILL, CPA
State Auditor**

**Beanpole Telecommunication Project
Performance Audit
May 2002**

Authority, Purpose, Scope

This performance audit was conducted pursuant to Section 2-3-103, C.R.S., which authorizes the Office of the State Auditor to conduct performance audits of all departments, institutions, and agencies of state government. The audit focused on the methods used by the Department of Local Affairs to implement the Beanpole Telecommunication Project. The audit also examined how the creation of the State's multi-use network (MET) impacted the Beanpole project. To accomplish our audit objectives, we interviewed representatives from the Department of Local Affairs, the Colorado Rural Development Council, and the Division of Information Technologies MNT Program Office which oversees the MNT. We also reviewed Beanpole project grant applications and spoke with representatives from several communities that received Beanpole project grants. The audit work performed, from December 2001 through April 2002, was conducted in accordance with generally accepted governmental auditing standards.

We gratefully acknowledge the assistance and cooperation extended by management and staff at the Department of Local Affairs, the Division of Information Technologies, and the Colorado Rural Development Council. We also acknowledge the input of representatives of Beanpole project grant recipient communities.

Overview

The General Assembly created the Community Incentive Fund grant program, better known as the Beanpole project, to encourage local public offices to aggregate telecommunication traffic as a way of enticing private telecommunication providers to build infrastructure in all areas of the State. The project operates under the administration of the Department of Local Affairs (DoLA). A private contractor, the Colorado Rural Development Council (CRDC) oversees the design, implementation, and management of the project at the local level. In Fiscal Year 2000, the General Assembly appropriated \$4.8 million from capital construction and severance tax monies to operate the project. In an effort to expand the fiscal backing of the Beanpole project, DoLA supplemented the original Beanpole appropriation with money from its Energy and Mineral Impact Fund. As a result, to date actual funding for the Beanpole project totals approximately \$5.3 million. The Beanpole project has not received any additional monies from the General Assembly since the original appropriation in Fiscal Year 2000.

For further information on this report, contact the Office of the State Auditor at (303)869-2800.

DoLA and CRDC used a two-step process to give Beanpole grants to local communities. Eligible communities received up to \$60,000 in planning grants to study their aggregated local public office telecommunication needs and develop a comprehensive plan to obtain needed services. A total of 18 communities representing 36 counties from all geographic regions of the State were awarded approximately \$670,000 in Beanpole planning assistance. The majority of the original Beanpole project funding was used for implementation grants. Implementation grant recipients have used the money to aggregate their local public office telecommunication traffic and to purchase advanced telecommunication services from private or not-for-profit telecommunication vendors. Seven communities representing sixteen counties received implementation grants totaling about \$4.6 million.

In June 2000 the State developed a public/private partnership with Qwest to build a high-speed fiber-optic telecommunication network for the State of Colorado. Qwest owns and operates the network infrastructure while the State of Colorado serves as the anchor tenant purchasing 20 megabytes of traffic space on the backbone. This telecommunication traffic capacity is known as the MNT. Qwest and its private partners will build a total of 70 connection bases, known as Aggregated Network Access Points (ANAPs), across the State including at least one in every county. Each ANAP will provide 20 megabytes of access capability for government users. Currently, the State is paying for the reserved space on 42 ANAPs. All 70 ANAPs should be constructed and available to MNT users by June 30, 2003. The Beanpole legislation requires recipient communities to connect their aggregated public office traffic to the multi-use network (MNT).

Overall, we conclude that the Beanpole project has not yet met its two main objectives of encouraging private telecommunication vendors to offer services throughout the State and connecting local public offices to the MNT on a large scale. As of April 2002, only three of seven implementation grant recipients had actually found a private telecommunication vendor that could meet their needs. In addition, only one Beanpole recipient representing 88 public offices had connected to the MNT. Two other recipients should connect at least some of their public offices to the MNT by July 2002. The low number of public offices connected to the MNT to date brings into question whether local public offices will use the MNT over the long-term.

Beanpole Project Impacted by MNT

Coordination and communication problems between the Beanpole project and the MNT have existed since the beginning of Beanpole project. These problems have impacted the overall success of the Beanpole project by delaying the ability of local communities to connect to the MNT. The Beanpole project began awarding grants to communities a full year prior to the

development of the MNT. As a result, several Beanpole grant recipients were ready to enter the implementation phase long before the MNT capability existed in their area. In addition, only in the last six months has the Division of Information Technologies MNT Program Office assigned staff to aid local communities in solving the technical problems that prevented their connection to the MNT. Our work indicates that having State employees dedicated to assisting local communities has helped some Beanpole recipients move toward the final goal of connecting to the MNT.

Evaluate Payment for Individual ANAP Sites

Under its contract with Qwest, the State pays a flat monthly fee for the 20 megabytes of space it reserves at each Aggregated Network Access Point (ANAP). In Fiscal Year 2002 the actual monthly cost per ANAP averaged \$3,500 but ranged from \$2,500 to \$10,500 depending on who owns the ANAP and its location. The State paid approximately \$1.4 million for the 42 ANAPs that are currently available to MNT users. The reserved space can be used by State agencies and other eligible MNT users including Beanpole grant recipients. The State pays the monthly fee even if none of the reserved bandwidth is used. We found that several Beanpole communities have chosen to bypass their local ANAP and connect to the MNT through a less costly ANAP. As a result, the reserved bandwidth at some ANAP sites remains unused. The Division of Information Technologies MNT Program Office plans to evaluate the use of each ANAP to determine if the State should continue to reserve 20 megabytes of bandwidth at all 70 ANAP sites. However, this evaluation will not begin for at least one more year. As a result, the State will continue to pay for ANAP space that may never be used. We believe that the evaluation should begin immediately by focusing on those ANAP sites that have been in operation for over a year.

Ensure that Contracts Are in Place Prior to Providing Grants

DoLA representatives informed us that it is their practice to retain Beanpole project grant funds until the recipient community is ready to move forward, signs a contract with a vendor, or is ready to spend the money. However, we found that DoLA gave three recipients a total of \$3.3 million in implementation grants and as of March 2002 these communities had spent only \$570,000 of the principal. At the same time, these communities have earned approximately \$116,500 in interest from the grants.

The original Beanpole legislation is silent regarding the expenditure of interest income. DoLA returns any interest it earns on the Beanpole appropriation to the original source of the money, either the capital construction or severance tax fund. Despite unclear statutory authority, DoLA gave these three communities permission to retain the interest income and spend it on

SUMMARY

Beanpole related expenses. However, DoLA has not specifically defined Beanpole related. DoLA representatives informed us that expenditures financed with interest are not, in their opinion, subject to the same limitations as the original Beanpole appropriation.

We have concerns regarding Beanpole recipients earning interest income and the lack of guidelines for spending that interest income. To address our concerns we are recommending that DoLA should retain all grant monies until it receives a copy of a signed contract with a private telecommunication vendor. In our opinion, DoLA should require that any interest earned by communities on Beanpole grants either be returned to the State or be spent in accordance with the provisions of the original Beanpole legislation.

Our recommendations and the responses of the Department of Local Affairs and the Division of Information Technologies can be found in the Recommendation Locator on page 5.

RECOMMENDATION LOCATOR

Rec. No.	Page No.	Recommendation Summary	Agency Addressed	Agency Response	Implementation Date
1	22	Ensure that the Division of Information Technologies MNT Program Office continues to dedicate staff to work with all local communities, including Beanpole recipients, to help with their connection to the multi-use network.	Division of Information Technologies	Agree	April 2002
2	24	Work with the Division of Information Technologies MNT Program Office to develop guidelines telling communities how to connect to the multi-use network. If an agreement cannot be reached, seek clarification of the legislative intent of the Beanpole legislation concerning connection to the multi-use network.	Department of Local Affairs	Agree	July 2002 through closeout of Beanpole activities.
3	25	Evaluate whether the State needs to continue to reserve and pay for bandwidth at each ANAP site.	Division of Information Technologies	Agree	May 2002
4	28	Retain all Beanpole grants until the Department receives a signed copy of a contract with a telecommunication vendor. Establish guidelines for the expenditure of interest earned on Beanpole grants.	Department of Local Affairs	Partially Agree	June 30, 2002

Multi-Use Network Provides Telecommunication Access Throughout the State

Through Senate Bill 96-102, the General Assembly noted the importance of developing a statewide information infrastructure that would promote economic growth throughout the State. In June 2000 the State developed a public/private partnership with Qwest to build a high-speed fiber-optic telecommunication network for the state of Colorado. Qwest owns and operates the network infrastructure while the state of Colorado serves as the anchor tenant purchasing 20 megabytes of traffic space on the backbone. This telecommunication traffic capacity is known as the multi-use network (MNT). The MNT allows the State to consolidate its telecommunication needs into a single network. When fully operational, the MNT will provide time-sensitive services such as voice, video, and IP data services to all counties of the State. Under the agreement with the State, Qwest and its private partners, Phillips Telephone Company, and Century Tel, will build a total of 70 connection bases, known as Aggregated Network Access Points (ANAPs), across the State including at least one in every county. Each ANAP provides 20 megabytes of access capability for government users. To date, the State is paying for reserved space at 42 ANAPs. All 70 ANAPs should be constructed and available for MNT users by June 30, 2003.

State MNT representatives anticipate several benefits for the State from the development of the MNT. These include:

- **Economic Development**—By serving as the anchor tenant in the MNT, the State encouraged Qwest and its private partners to build a telecommunication infrastructure throughout the State. As a result, all communities will have access to advanced telecommunication services that are necessary for both the public and the private sector.
- **Growth of E-Government**—The MNT provides the opportunity for the State to offer more services online. This allows citizens throughout the State access to government services online saving them both time and money.

- **Bridge the Digital-Divide**—The MNT enables rural communities to access the same advanced telecommunication services that are available along the Front Range.
- **Aggregating Demand to Reduce Costs**—The MNT allows the State to consolidate its telecommunication needs from multiple networks into one network, thereby reducing administrative and maintenance costs.
- **Statewide Intranet and Access to the Internet**—The MNT provides an Intranet that allows the connected entities, namely public offices, to communicate with each other without going through outside channels. This results in quicker and cheaper communications. Additionally, the MNT provides transport to the outside commodity Internet, enabling a user to purchase supplemental services to utilize the World Wide Web.

As noted, Qwest and its partners are building the telecommunication infrastructure throughout the State. The Qwest infrastructure contains the capability to carry more than the State's traffic. The MNT represents that portion of the infrastructure used by the State and public agencies. Only government agencies and quasi-government agencies such as libraries and nonprofit hospitals can use the MNT portion of the infrastructure. By Executive Order state agencies and institutions must use the MNT, whereas other local public entities can, but are not required to, use the MNT. The remaining traffic capacity in the Qwest-owned infrastructure is known as the Colorado High Speed Digital Network. Private users and those public offices that choose not to use the MNT can connect to the Colorado High Speed Digital Network. Some services and rates offered through this private side are different from those available through the MNT. Each person or office connecting to the private High Speed Digital Network must negotiate a contract with Qwest or one of its private partners.

In its contract with Qwest, the State has set the tariff rates that MNT users will be charged through Fiscal Year 2005. The State pays Qwest approximately \$5.0 million per year for operational costs including the reserved 20 megabytes and ANAP fees. In addition, the State charges the individual state and public agencies a 23 percent surcharge to access the MNT. This surcharge, known as the Colorado Digital Divide Elimination Fee (CDEF), covers a portion of MNT contractual fees. The CDEF pays the cost of bringing fiber-optic connectivity to every county, eliminates distance-sensitive pricing for data circuits, and covers recurring circuit costs and network maintenance. This additional cost is shared by all users and can be reduced as more public offices connect to the MNT portion of the backbone.

Beanpole Funding Goes to Local Communities

In 1999 the General Assembly established the Community Incentive Fund grant program, better known as the Beanpole project. The Beanpole legislation created a pilot program to demonstrate whether aggregating local community telecommunication needs would entice private providers to build the necessary infrastructure in underserved areas of the State. The project offers grant funding to allow communities in rural areas to aggregate their public office telecommunication needs, coordinate telecommunication purchases, and connect to the MNT. The Beanpole legislation benefits communities by providing money to purchase telecommunication services. At the same time, the Beanpole project promotes the MNT by requiring grant recipients to connect to the MNT. Beanpole funding also encourages the development of private-sector telecommunication providers because recipients must purchase their telecommunication services from private providers. By providing a guaranteed revenue stream through the Beanpole project, the State hopes to encourage telecommunication companies to invest and build the needed infrastructure in underserved communities. Although Beanpole funding is limited to public offices, the project can also benefit the private sector by providing the infrastructure necessary for them to use advanced telecommunication services.

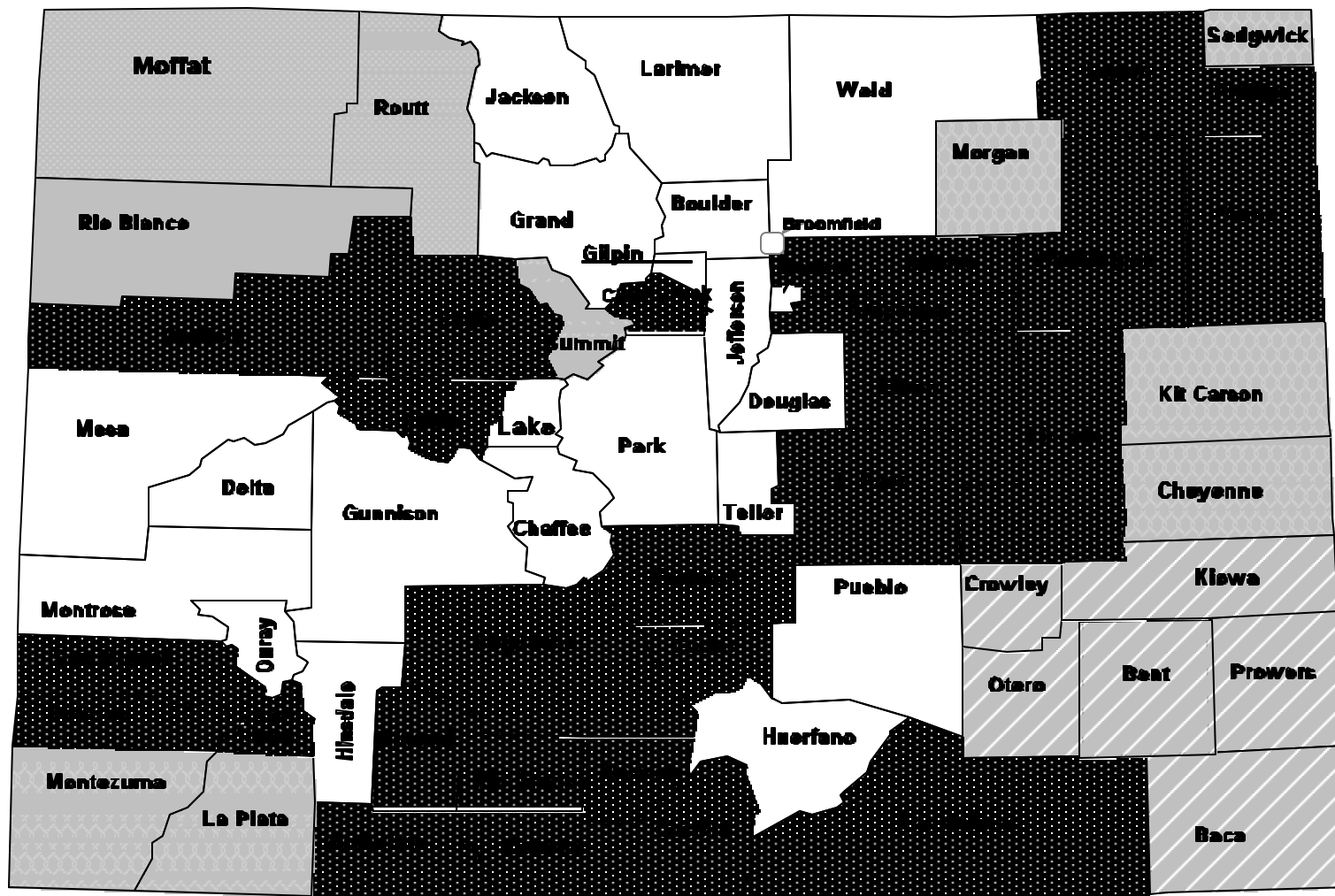
The Beanpole project operates under the administration of the Department of Local Affairs (DoLA). As required by statute, the Department selected a private contractor, the Colorado Rural Development Council (CRDC), to oversee the design, implementation, and management of the project at the local level. To operate the pilot project, DoLA received an appropriation of \$4.8 million. The funding comes from capital construction and severance tax monies. The legislation allowed for 10 percent of the capital construction appropriation to be used for communities to develop a plan detailing their telecommunication needs. The remaining funds are dedicated to the actual implementation of the telecommunication services. In an effort to expand the fiscal backing of this project, DoLA decided to supplement the Beanpole appropriation with money from the Department's Energy and Mineral Impact Fund. As a result, to date, actual funding for the Beanpole project totals approximately \$5.3 million. The Department has contracts with local communities encumbering all of the appropriation, although not all of the money has actually been spent. The General Assembly appropriated an additional \$5.0 million in capital construction funds for continuation of the project during Fiscal Year 2002. However, due to budget constraints, the General Assembly eliminated this appropriation. Although DoLA requested \$5.0 million for additional Beanpole project grants during Fiscal Year 2003, the final version of the Fiscal Year 2003 Long Bill did not include any funding for the project. DoLA will continue to oversee the grants that it has already provided to communities but will not make any new Beanpole grants.




DoLA and CRDC used a two-step process to give the Beanpole grant funding to communities.

- **Planning Grants**—The Beanpole project provides communities with up to \$60,000 to study their telecommunication needs and develop a comprehensive Community Infrastructure Network Implementation Plan (CINIP). The CINIP details the community's current, near-term, and long-term advanced telecommunication needs as well as a plan for action to implement telecommunication services. Most communities use the funding to hire professional consultants to produce the CINIP.
- **Implementation Grants**—Communities can apply for implementation funds once they complete an acceptable CINIP. Implementation funds can be used over a two-year period to purchase advanced telecommunication broadband services from a private-sector vendor. The Beanpole legislation prohibits using implementation funding to pay for infrastructure, switches, end-user equipment, buildings, or personnel expenses.

To date, a total of 42 counties from throughout the State have been awarded planning and/or implementation grants through the Beanpole project.

Beanpole Funding



-  Communities That Received Planning Awards Only
-  Communities That Received Implementation Awards Only
-  Communities That Received Planning and Implementation Awards

Audit Scope

The purpose of the audit was to determine how the appropriation for the Beanpole project has been spent and whether the project has been successful. We examined the methods used by the Department of Local Affairs and the Colorado Rural Development Council to provide grant funding to participating communities. Through interviews with community representatives and state representatives, we obtained information on the success and/or problems impacting the Beanpole project, including its relationship to the MNT.

Beanpole Implementation

Chapter 1

We examined whether Beanpole project funding has been successful based on the overall objectives of the legislation. The primary objective of the Beanpole project is to aggregate local community public-sector telecommunication purchases to produce a consistent revenue stream for private-sector telecommunication companies. It is hoped that such a guaranteed revenue stream will encourage private companies to build state-of-the-art infrastructure in all communities in the State. Another objective is to connect these local public offices to the MNT allowing for quicker and less expensive communication costs between public entities. To meet these objectives, the Department of Local Affairs (DoLA) implemented a two-stage process to provide the Beanpole funding to communities. The planning stage gives communities funding to identify their aggregated public office advanced telecommunication needs. The implementation stage provides money to allow communities to purchase telecommunication services and connect to the MNT. Although numerous communities have received funding to identify their telecommunication needs, to date, only one Beanpole recipient has connected some of its public offices to the MNT. As a result, we found that, to date, the Beanpole project has yet to meet its identified objectives.

Planning Stage

As allowed by statute, DoLA set aside a portion of the Beanpole appropriation to give communities planning grants. To provide additional planning grants, DoLA augmented the Beanpole money with funding from the Energy and Mineral Impact Fund. The Department working with its private contractor, the Colorado Rural Development Council (CRDC), notified rural communities throughout the State of the availability of Beanpole planning grants. Beanpole planning funds allow communities in underserved areas of the State to identify their telecommunication needs and capabilities and then develop a comprehensive plan to meet those needs. Most communities used these funds to hire consultants to provide expert assistance and to develop the community's Community Infrastructure Network Implementation Plan (CINIP). We found that 20 communities requested planning funds. Of those 20 applicants, DoLA and CRDC denied funding to 3 communities because they either failed to include the required 10 percent local cash or in-kind match or the application did not appear to show community interest for aggregating telecommunication traffic.

The Department and CRDC awarded Beanpole planning assistance grants to rural communities across the State. Under the Beanpole legislation a community is self-defined and can represent a town, a city, a county, a group of counties, or a group of local governments. In addition, DoLA tries to ensure that multi-jurisdictional levels within the self-defined community are represented. As detailed in the following chart, 18 communities representing 36 counties from all geographic regions of the State were awarded a total of approximately \$670,000 in Beanpole planning assistance.

Beanpole Project Total Planning Funds			
Community	Amount Requested	Amount Awarded	Amount Disbursed to the Community
TRECC <i>(Adams, Arapahoe, Cheyenne, Elbert, El Paso, Lincoln, Kit Carson, Washington)</i>	\$53,400	\$53,400	\$35,850 ²
Clear Creek County	\$35,000	\$35,000	\$8,500 ¹
Custer County	\$45,000	\$45,000	\$11,250 ¹
Eagle County	\$30,000	\$30,000	\$21,450 ¹
Fremont County	\$45,000	\$45,000	\$4,500 ¹
Garfield County	\$30,000	\$30,000	\$7,500 ¹
Las Animas County	\$27,000	\$27,000	\$22,225 ¹
Logan County	\$40,000	\$44,000	\$4,000 ¹
Monte Vista <i>(Alamosa, Rio Grande, Costilla, Conejos, Saguache, Mineral)</i>	\$29,990	\$29,990	\$27,534 ²
Morgan County	\$30,000	\$30,000	\$19,350 ²
Phillips County	\$25,000	\$25,000	\$2,500 ¹
Pitkin County	\$60,000	\$60,000	\$33,000 ¹
San Miguel County	\$30,000	\$30,000	\$26,791 ²
Sedgwick County	\$42,500	\$42,500	\$30,135 ²
Southwest <i>(Montezuma, La Plata, Dolores, San Juan, Archuleta)</i>	\$30,000	\$30,000	\$30,000 ³
Northwest <i>(Routt, Rio Blanco, Moffat)</i>	\$30,000	\$30,000	\$30,000 ³
Summit County	\$57,320	\$57,320	\$57,320 ³
Yuma County	\$27,320	\$27,320	\$22,820 ²
Total	\$667,530	\$671,530	\$394,725

Source: Office of the State Auditor analysis of documents provided by the Department of Local Affairs and the Colorado Rural Development Council.

¹ Planning phase still underway.

² Planning phase complete, not all planning funds were used.

³ Planning phase complete; all planning funds were used.

In return for providing planning funding, DoLA and CRDC place certain requirements on the recipient communities. For example, each community must involve all eligible public office entities in collaborative discussions. Communities are also encouraged to work with private and nonprofit sector entities to identify the overall telecommunication needs of the community. At the end of its planning process, which can last up to 18 months, a community must produce a CINIP. DoLA and CRDC require that each community's CINIP contain specific information. CINIP information requirements include detailing the number and types of public offices whose telecommunication traffic will be aggregated. The CINIP also describes the specific telecommunication services needed. In addition, the document describes the community's perceived short-term and long-term benefits as well as the overall goals and objectives of the advanced telecommunication services. Finally, the CINIP details how the community will sustain the telecommunication services once the Beanpole funding is spent. This planning process allows communities to comprehensively identify their specific advanced telecommunication needs and aids them in their search for a vendor that can meet these needs. Communities use the CINIP and the detailed information it contains to develop a request-for-proposal (RFP) to find a telecommunication vendor that can best meet their needs. To date, only one planning grant recipient failed to produce a CINIP that met DoLA's quality and comprehensiveness requirements.

We interviewed both community and state agency representatives to determine whether they believe the Beanpole project's planning process has been successful. Community representatives indicated that the planning money allowed them to hire consultants to help them quickly and comprehensively identify their aggregated telecommunication needs. DoLA and CRDC representatives agreed that the planning process has been successful. They noted that it achieved the desired outcome of involving large segments of the communities in identifying telecommunication needs and creating comprehensive plans to meet those needs. Individuals we interviewed indicated that the planning process also encouraged rural communities to aggregate as many public offices as possible to produce a guaranteed revenue stream. These representatives stated that without a guaranteed revenue stream private vendors might be reluctant to offer advanced telecommunication services in rural areas of the State.

The Beanpole project planning process resulted in 18 communities from rural areas throughout the State carefully examining their overall telecommunication needs. The resulting CINIPs allow these communities to take the next step: developing a request-for-proposal to find a private vendor who can meet their advanced telecommunication needs.

Implementation Stage

DoLA and CRDC used the majority of the original Beanpole appropriation to fund implementation grants. The overall objectives of the Beanpole project are to encourage private telecommunication vendors to build infrastructure in underserved parts of the State and allow those communities to connect to the MNT. Implementation grant recipients plan to use the funding to underwrite the cost of leasing advanced telecommunication services from a private or not-for-profit telecommunication service provider. The underlying belief is that aggregating demand and providing a consistent revenue stream will encourage private telecommunication vendors to build the necessary telecommunication infrastructure to all areas of the State. As a result, state-of-the-art telecommunication services will be available for both public- and private-sector use in all geographic regions of the State.

A total of eight communities who had completed the planning process applied for the approximately \$4.6 million available for Beanpole implementation grants. DoLA and CRDC staff awarded implementation grants to 7 communities representing 16 counties based on the information in the CINIP, the MNT ANAP deployment schedule, and the amount of funding requested. For example, staff examined the CINIPs to determine the reasonableness of bandwidth requirements, the number and types of public offices whose traffic would be aggregated, the distances between municipalities, and the size of the community. When making implementation grants, the Department gave priority to those communities scheduled to receive early MNT deployment as well as those the Department perceived as ready to quickly move forward. In order to provide money to as many applicants as possible, DoLA decided to partially fund several applications rather than fully fund only a couple. DoLA staff also reported that the implementation grant amount is meant to represent the amount of revenue necessary to induce a private vendor to provide the needed telecommunication services and connection to the MNT. The following table details those communities that DoLA awarded implementation grants.

Beanpole Total Implementation Funds				
Community	Number of Public Offices Planned for Connection	Amount Requested	Actual Amount Awarded	Amount Disbursed to Community
TRECC (Cheyenne, Kit Carson)	16	\$ 167,200	\$ 171,200* ¹	\$0
Morgan County	23	\$ 258,500	\$ 269,150* ²	\$ 5,570
Sedgwick County	15	\$ 192,600	\$ 204,965* ³	\$0
Southeast (Baca, Bent, Kiowa, Prowers, Otero, Crowley)	88	\$1,000,000	\$ 750,000	\$ 712,000
Southwest (Montezuma, La Plata)	108	\$2,500,000	\$1,375,000	\$1,306,250
Northwest (Routt, Rio Blanco, Moffat)	109	\$2,500,000	\$1,375,000	\$1,306,250
Summit County	67	\$ 472,688	\$ 72,688	\$0
Total	426	\$7,090,988	\$4,618,003	\$3,330,070
<p>Source: Colorado Office of the State Auditor analysis of data provided by the Colorado Rural Development Council and the Department of Local Affairs.</p> <p>Note: Public offices may include, but are not limited to, city & county offices, public libraries and hospitals, fire stations, schools and court houses.</p> <p>*Reflects funds rolled over from the planning stage.</p> <p>¹TRECC rolled over \$4,000 of unused planning dollars.</p> <p>²Morgan rolled over \$10,650 of unused planning dollars.</p> <p>³Sedgwick rolled over \$12,365 of unused planning dollars.</p>				

Although seven recipients were awarded implementation grants, DoLA representatives stated that the Department intends to retain the money until it believes the community is ready to move forward. The three communities who have selected their telecommunication providers have actually received 95 percent of their implementation grant money. Another recipient received about \$5,000 of its implementation grant for additional consultant

technical assistance. Four of the implementation grant recipients are still working to select a telecommunication vendor, and therefore, DoLA has retained almost all of their award monies. Since DoLA made the original implementation grants, another five communities have submitted CINIPs. These communities may receive implementation funding if the General Assembly decides to appropriate additional money for the Beanpole project. Since they have already identified their telecommunication needs, these five communities may be able to go ahead, at least in part, and purchase telecommunication services without receiving Beanpole implementation grants.

As noted, DoLA gave three communities 95 percent of their implementation grants because they had selected their telecommunication vendor. One recipient community, Southeast Colorado, connected a portion of their public offices to the State's digital network, now known as the MNT, in July 2001. We estimate that a second recipient, Northwest Colorado, will connect some of their public offices to the MNT by June 2002. The third recipient, Southwest Colorado, plans to connect to the MNT by July 2002. The following bullets detail the current status of these three communities.

- **Southeastern Colorado** representing the six counties of Baca, Bent, Kiowa, Prowers, Otero, and Crowley, connected to the State's digital network in July 2001. To date, it has successfully aggregated traffic from 35 public offices with another 53 offices to be connected in the next couple of months. Representatives noted benefits to public sector users including utilizing Internet services to create and access Web sites as well as to send and receive e-mail. Future expected benefits include the capability for interactive video for prisoner arraignments, which should save the counties both time and money. Representatives from the local telecommunication provider, SECOM, informed us that the Beanpole project positively affected their business with private users. However, Beanpole representatives for Southeastern Colorado stated that it is too early to determine the long-term effects of the Beanpole project or whether it will expand economic growth in the area.
- **Southwest Colorado** represents Montezuma and La Plata counties. Montezuma County signed a contract with Qwest to connect the county's previously aggregated telecommunication traffic to the MNT. A representative estimated that Montezuma County should be connected to the MNT by July 2002. La Plata County plans to connect its existing local loop to the MNT via the local college. These offices should have MNT access by June 2002. In total, the Southwest Colorado community plans to aggregate traffic from 108 public offices. Although the community has not yet received the telecommunication services or connected to the MNT, Southwest representatives acknowledged some positive aspects.

For example, representatives stated that Beanpole funding convinced local public offices to connect to the MNT despite some financial concerns. Representatives believe the area will also experience long-term benefits such as high bandwidth, high-speed Internet access, and video conferencing capabilities that will save the counties time and money on travel expenses.

- **Northwest Colorado** representing the three counties of Routt, Rio Blanco, and Moffat, plans to connect a total of 109 public offices representing 26 entities to the MNT in June 2002. The community selected a local vendor, NC Telecom, to aggregate public office traffic and connect into the MNT. Final execution of the contract was scheduled for April 2002. Although Northwest Colorado has not implemented its telecommunication services, community representatives indicated that Beanpole funding encouraged additional telecommunication providers to build more infrastructure in the area. This promoted price competition and improved customer service. Beanpole funding encouraged local offices to connect to the MNT, something that was unlikely to happen without the money. The counties also expect future long-term benefits such as economic development due to availability of advanced telecommunication services.

Overall, we conclude that the Beanpole project has not yet fully met its two main objectives of encouraging private telecommunication vendors to offer services throughout the State and connecting local offices to the MNT on a large scale. Our work indicates that the planning grants have allowed 18 communities, representing 36 counties, to determine their aggregated telecommunication needs. Community and state agency representatives we interviewed stated that without aggregation and the resulting revenue stream, private vendors would be reluctant to offer advanced telecommunication services to small, rural communities. Seven communities have used their CINIP to search for a telecommunication vendor. In each case more than one vendor expressed interest in offering the communities telecommunication services. However, as of April 2002, only three of seven communities have actually found a vendor. The other four continue their search for a vendor who can meet their needs at a price they can afford. Slow progress has also been made regarding the second objective of connecting local offices to the MNT. As of April 2002, only one Beanpole project implementation grant recipient, representing 88 public offices, has actually connected to the MNT. Two other communities, representing another 217 public offices, should be connected by July 2002. The lack of public offices connected to the MNT makes it impossible to determine whether the MNT benefits these entities or whether public offices will continue to use the MNT in the long-term.

Beanpole Project Impacted by MNT

As we have noted, progress on the Beanpole project has been slow. One objective of the Beanpole legislation is to promote local community use of the MNT by requiring Beanpole recipients to connect their aggregated public office traffic to the MNT. The MNT is a public/private partnership between the State and Qwest to build and maintain a high-speed fiber-optic telecommunication network in all counties of the State. However, since the implementation of the Beanpole project in July 1999, only one recipient has actually connected its local offices to the MNT. Our work identified an initial lack of coordination between the Beanpole and MNT projects that impacted the ability of local offices to connect to the MNT.

Coordination problems have existed since the beginning of the Beanpole project. The timing for issuing Beanpole grants and creating the MNT has always been out-of-sync. DoLA and its private consultant, the Colorado Rural Development Council (CRDC), began providing Beanpole grants to communities in July 1999. However, the contract between the State and Qwest to develop the MNT and build the individual ANAP connection sites was not effective until July 2000. As a result, no work on the development of the MNT took place until one year after communities began to receive Beanpole grants. DoLA attempted to tie the awarding of implementation grants to the MNT ANAP deployment schedule. However, several Beanpole implementation grant recipients were ready to enter the implementation phase long before the MNT capability existed in their area. Communities and private vendors cannot work with MNT staff on technical issues of connection if the MNT does not yet exist in their community.

An initial lack of communication between the MNT staff, Beanpole staff, recipient communities, and private vendors has also slowed connections to the MNT. The MNT staff focused on working with Qwest to get the telecommunication infrastructure to all areas of the State. At the same time, local communities, including Beanpole recipients, and their private telecommunication providers needed answers to technical questions to make the actual connection to the MNT. An MNT Program Office representative noted that initially there were no staff dedicated to providing technical and business assistance to local communities wanting to utilize the MNT. Without MNT staff dedicated to answering questions and solving problems facing local communities, these communities could not connect to the MNT.

Only in the last six months has the Division of Technologies MNT Program Office assigned staff to aid local communities in connecting to the MNT. MNT staff along with two private consultants hired by the MNT Program Office now work directly with local community

representatives and their telecommunication vendors to solve business and technical problems. For example, consultants visit the community and help the private vendor decide the most cost-efficient method to make the MNT connection. This use of MNT Program Office staff has helped some Beanpole recipients to achieve the goal of connecting to the MNT. In recent months, two Beanpole recipients have worked with the MNT Program Office staff on issues such as the cost of the connection to the ANAP and the most cost-effective last-mile connection technology. Both of these Beanpole recipients plan to connect their aggregated public office traffic to the MNT by July 2002.

It appears that communication and coordination between Beanpole recipients, their private vendors, and MNT Program Office staff has improved in the last few months. As a result, two more Beanpole recipients plan to connect to the MNT in the next few months.

Recommendation No 1:

The State's Division of Information Technologies MNT Program Office needs to ensure that it continues to dedicate staff to work with all local communities, including Beanpole recipients, to assist these communities in their connection to the multi-use network.

Division of Information Technologies Response:

DoIT concurs with this recommendation. Beginning approximately April 1, 2002, the MNT project team was expanded to include 4 business and technical consultants to assist in responding to field inquiries from Beanpole communities. Onsite meetings in Salida, Durango, Cortez, Julesburg, Sterling, Ft. Morgan, Limon, Trinidad and Montrose have already been accomplished.

Clarify ANAP Connection Requirements

The State's agreement with Qwest calls for the eventual construction of 70 connection bases statewide for the MNT, known as Aggregated Network Access Points (ANAPs), including at least one in every county. Sixty-five of the seventy ANAP sites will be owned by private vendors including Qwest, Century Tel, and Phillips Telephone Company. The remaining five Super ANAPs, located in Denver and Pueblo, will be owned by the State. When building the individual ANAPs, the private owners anticipated a consistent revenue stream from local public offices and private users who would use the local ANAP to connect to the MNT. Although the Beanpole legislation mandates that grant recipients

connect their aggregated traffic to the MNT, it is silent regarding which ANAP site a community must use. The ANAP owners believe that communities must connect to the MNT through the ANAP located in their county. However, neither the Beanpole legislation nor the State's contract with Qwest requires that communities connect to the MNT via their local ANAP site. On the other hand, MNT Program Office representatives indicated that the MNT Strategic Plan contained an expectation that communities would connect at their local ANAP. We found conflicting interpretations of the connection requirement.

The State reserves 20 megabytes of bandwidth at each ANAP. Ten megabytes are reserved for state entities, and ten megabytes are for other eligible MNT users, including Beanpole recipients. ANAP owners receive a guaranteed monthly payment for the 20 megabytes of reserved space whether or not eligible entities actually use the bandwidth. In Fiscal Year 2002 the monthly payments for the 20 megabytes of reserved space averaged just over \$3,500 per month for the 42 operational ANAPs. However, the actual monthly payment varied from \$2,500 to \$10,500 depending on who owns the ANAP. In addition, the ANAP owners anticipated receiving additional revenues from the connection fees paid by the individual entities for the actual connection to the MNT.

Some Beanpole recipients, representing several counties, have elected to connect to the MNT via one ANAP instead of using the local ANAP in each county. For example, six counties in Southeastern Colorado worked together to aggregate telecommunications traffic from 88 local public offices. In July 2001 the Southeastern Colorado community connected to the MNT via the ANAP site in Pueblo. This lowered the connection fees paid by Southeastern Colorado since it only paid to connect to one ANAP rather than six. However, the owner of the ANAP sites in five of the six counties is complaining that allowing Southeastern Colorado to connect via one ANAP resulted in the company not receiving all anticipated income. The owner has not quantified the amount of lost income.

As already noted, under its MNT contract with Qwest, the State pays a flat monthly fee, averaging \$3,500 in Fiscal Year 2002, to reserve 20 megabytes of bandwidth at each ANAP site whether or not an eligible entity actually uses the bandwidth.

The Southeastern Colorado counties are negotiating with MNT Program Office representatives to continue their combined connection at Pueblo. Other Beanpole recipients and owners of ANAP sites will face this same issue in the future. Several of the Beanpole recipients represent two or more counties seeking to aggregate their public offices and increase their telecommunication buying power. These groups of counties may also find it more cost-effective to connect through one or two ANAP sites rather than the ANAP in each county. For example, the Northwest community, comprising the three counties of Routt, Rio Blanco, and Moffat, plans to connect its aggregated traffic using only

two ANAP locations. Requiring communities to connect at each local ANAP could raise costs and therefore impact the long-term sustainability of paying for advanced telecommunication services. Given that one goal of the Beanpole project is to maintain the communities' connection to the MNT, it makes sense that communities should be able to use the most cost-effective method. Therefore, we see little reason to require Beanpole communities to connect their aggregated traffic through each local ANAP.

Recommendation No. 2:

The Department of Local Affairs should work with the Division of Information Technologies MNT Program Office representatives to develop guidelines detailing how communities can connect to the multi-use network. If the Department and MNT representatives cannot reach an agreement, the Department should seek clarification of the legislative intent of the Beanpole bill concerning the connection to the State's digital network.

Department of Local Affairs Response:

Agree, the Department will continue to encourage and cooperate with the MNT staff and consultants in developing the guidelines and necessary business practices and forms to allow Beanpole and other communities' last mile providers to clearly understand how they will be able to connect to the MNT network. Since no funds have been appropriated for Beanpole activity or administration in FY 03, Local Affairs will focus on existing contract activities and project close out. If the program continues beyond FY 03, the Department will review the situation to determine whether clarification of legislative intent is necessary.

Evaluate Payments for Individual ANAP Sites

Under its current contract with Qwest and its private partners, the State pays a flat monthly fee to reserve space at each ANAP. The monthly fee ranges from \$2,500 to \$10,500 depending on which private company owns the ANAP and the location of the ANAP. The State began paying for reserved space at the first 42 ANAPs on September 15, 2001. Between September 2001 and June 30, 2002, the State paid approximately \$1.4 million to reserve 20 megabytes of bandwidth at these 42 ANAPs. This reserved bandwidth can

be used by State agencies and other eligible MNT users. The State pays this fee even if none of the bandwidth is used. This brings into question the costs and benefits of the State's contract with Qwest when the State continues to pay for bandwidth at unused ANAP sites.

We found that several Beanpole communities have chosen to bypass their local ANAP and connect their aggregated traffic through a less costly ANAP site. In some cases, without these local communities, the ANAP site is not being used. The Division of Information Technologies MNT Program Office plans to reevaluate the use of each ANAP site during the fourth year of the contract with Qwest in Fiscal Year 2004. An MNT representative stated that one area that will be examined is whether the State should continue to pay for reserved bandwidth at ANAP sites that are not being used by state agencies or other eligible MNT users. Another option that will be considered is reducing the reserved bandwidth at some ANAP sites. However, this reevaluation will not take place for at least another year. As a result, the State will continue to pay Qwest and other private ANAP owners an average of \$3,500 per month for ANAP sites that may never be used. We believe that the Division of Information Technologies MNT Program Office should begin the reevaluation sooner. For example, some ANAP sites have been operating for close to a year. The MNT Program Office could begin to examine the use of these ANAPs immediately. If it is determined that the State does not need the reserved bandwidth, the Division of Information Technologies MNT Program Office should work with Qwest to modify the existing contract.

Recommendation No. 3:

The Division of Information Technologies MNT Program Office should immediately begin to evaluate whether the State needs to continue to reserve and pay for 20 megabytes of bandwidth at each ANAP site. If a determination is made that less bandwidth is required at specific ANAPs, the MNT Program Office should work with Qwest to modify the existing contract.

Division of Information Technologies Response:

DoIT concurs with the recommendation. Contract renegotiation has already begun on high priced ANAPs where not much traffic has been identified. This is occurring even before the ANAPs have been activated (Phase II and III ANAPs). DoIT is in the process of identifying reporting procedures on ANAP usage once they become activated. To date, Qwest has been hesitant to provide traffic information on their central offices that they consider proprietary. Alternate

methods of identifying traffic may have to be developed. The purpose of MNT is to provide the opportunity for economic development in rural Colorado by introducing high-speed bandwidth capability throughout the state. The goal will be to incubate economic development in rural Colorado without wasting state resources where demand is not and may not be present for a substantial period of time.

Ensure That Contracts Are in Place Prior to Providing Grants

The Department of Local Affairs (DoLA) administers the Beanpole project including oversight of the distribution of the appropriated monies. To date, actual funding, including both planning and implementation grants, for the Beanpole project totals approximately \$5.3 million. All of this funding has been encumbered by DoLA through contracts with the recipient communities. However, DoLA and the recipient communities have not actually spent all of the grant money. We found that some recipient communities have earned considerable amounts of interest and are spending this money on expenses that are not eligible according to the original Beanpole legislation.

As we have already noted, DoLA awarded seven communities implementation grants totaling approximately \$4.6 million. DoLA representatives informed us that it is their practice to retain grant monies until the recipient community is ready to move forward, signs a contract with a vendor, or is ready to spend the money. Our audit work found that DoLA gave three communities 95 percent of their implementation funds, ranging from about \$700,000 to approximately \$1.3 million, even though these communities had not signed contracts with a telecommunication provider. DoLA staff gave two explanations why these communities received most of their implementation funds. First, DoLA representatives commented that they gave the implementation funds to the communities because the communities said they were ready to sign a contract with a vendor. At the same time, the MNT deployment schedule indicated these communities could immediately connect to the MNT. Second, DoLA staff commented that the money was forwarded to the communities so that they could earn interest since Beanpole funding is limited and DoLA representatives believed they deserved additional funding.

Our work indicates that these three communities received a total of about \$3.3 million, but as of March 2002 only \$570,000 of the principal had been spent. However, these communities have earned a considerable amount of interest. We found that one recipient received \$1.3 million in implementation funding in October 2000. To date the community

has not spent any of the principal, but earned over \$76,000 in interest through February 2002. A second community received about \$700,000 in November 2000. This community has spent \$300,000 in principal and has earned over \$18,500 in interest. The third recipient received about \$1.3 million in implementation funding in October 2001 and earned about \$22,000 in interest through March 2002 while spending about \$270,000 of the implementation grant.

The original Beanpole legislation is silent regarding the expenditure of interest income. DoLA returns any interest it earns on the Beanpole monies to the original source of the funding, either the capital construction fund or the severance tax fund. In spite of unclear statutory authority, DoLA representatives gave two communities permission to retain the interest income and spend it on Beanpole related expenses. A representative of the third community commented that it is their county's policy to retain interest income earned on grants in its local general fund unless it is specifically required to be used for the original grant purpose. Our review of DoLA's Beanpole contract did not uncover any language requiring that the interest income be used for Beanpole related expenditures. Without specific language regarding the expenditure of interest income, the community believes it can spend the interest income as it sees fit. However, the community may spend at least a portion of the interest income to reimburse Beanpole related expenses. DoLA representatives commented that the expenditures financed with interest are not subject to the same limitations as the original Beanpole appropriation.

We have concerns regarding Beanpole recipients earning interest income on their implementation grants and the lack of guidelines for expenditure of that interest income. To address our concern regarding recipients earning interest income, DoLA should retain all grant funds until the recipient provides a signed contract with the private vendor. The contracts we reviewed indicate that communities intend to make payments to the private vendor throughout the life of the contract. As a result, even if DoLA retains the implementation grant until it receives a signed contract, communities may still earn a limited amount of interest since the vendor will be paid over a two year period. In this situation DoLA has two options. One option would be to require communities to return this interest income to DoLA. The second option would be to allow recipients to retain the interest but mandate that it be spent in accordance with the provisions of the original Beanpole legislation. The Beanpole statute specifically requires grant recipients to use Beanpole funds only for terminating communication equipment, leased digital telecommunication services associated with connecting a public office to the MNT and appropriate cost-recovery charges for the use of the MNT. The statute prohibits expenditures for end-user equipment, applications development, maintenance, training, or other similar costs. We found that currently some communities are spending or planning to spend the interest income they have earned on items such as consultant services outside the planning process,

legal costs, and travel reimbursement for public office staff. We question if such expenditures are eligible expenditures according to the Beanpole legislation.

Our audit work indicates that the issue of interest income needs to be addressed. Having DoLA retain the implementation grant monies until it receives a copy of a signed contract will limit the amount of interest earned. In addition, the development of guidelines for the expenditure of interest income will ensure that this money is used only for Beanpole eligible expenses.

Recommendation No. 4:

The Department of Local Affairs should retain all Beanpole grants until the Department receives a copy of a signed contract with a telecommunication vendor. In addition, the Department should establish guidelines regarding interest earned by recipients on Beanpole grants and require the return of the interest to the State or the expenditure of the interest income only on items eligible under the Beanpole legislation.

Department of Local Affairs Response:

Partially Agree, the Department has already taken a more restrictive approach to the releasing of implementation funds for the remaining Beanpole implementation communities. The Department will work with the 3 original implementation communities to better define and control the use of interest earnings to assure that such earnings are applied to Beanpole related costs. The Department is confident the communities which are benefitting from revenues provided by the General Assembly will be cooperative with the Department in this regard. The Department will initiate a formal request to the Beanpole project administrator no later than June 30, 2002 and will request quarterly reports on interest earned and interest expended with the first reports being due, for the period ending Sept. 30, 2002 on/before October 31, 2002. The Department will establish guidelines for the use of interest earnings and provide them to Beanpole contractors on/before June 30, 2002.

The Department advanced funds to allow the administering entity the ability to earn interest, part of which could be used for administrative and operating expenses associated with the Beanpole project. When such expenses started to become burdensome to BP administrative entities, the Department felt it would not be appropriate to require the administrative entity to incur such expenses with local tax revenues or through its existing appropriations when it was administering the

project on behalf of multiple jurisdictions. The Department continues to believe this is a useful and appropriate activity in the context of a pilot project for which local administrative expenses were not adequately addressed.

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