

**Report 12-18
December 2012**

UW System's Role in WiscNet and Grant-Funded Networks

STATE OF WISCONSIN



Legislative Audit Bureau ■

UW System's Role in WiscNet and Grant-Funded Networks

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Response

From the University of Wisconsin System



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Joe Chrisman
State Auditor

December 18, 2012

Senator Kathleen Vinehout and
Representative Samantha Kerkman, Co-chairpersons
Joint Legislative Audit Committee
State Capitol
Madison, Wisconsin 53702

Dear Senator Vinehout and Representative Kerkman:

As directed by 2011 Wisconsin Act 32, we have reviewed the University of Wisconsin (UW) System's use of broadband services and its relationship with WiscNet. WiscNet provides internet and other services to UW System institutions and other governmental and educational entities, including approximately three-fourths of Wisconsin's public school districts.

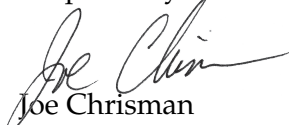
Although WiscNet is a membership-based nonprofit research and education association, its staff are UW System employees and its operations are integrated with those of UW System institutions. For example, UW-Madison serves as WiscNet's fiscal agent. WiscNet typically charges less for its services than commercial providers charge for similar services, in part, because WiscNet does not incur all of the costs that commercial providers do. The lack of sufficient written agreements between UW-Madison and WiscNet for the provision of goods and services lead us to question the adequacy of reimbursements.

In order to receive internet service from WiscNet, its members must obtain internet connections from other providers. Most obtain these connections through BadgerNet, a state-supported network operated by a consortium of private telecommunications companies. However, UW System has also developed its own network. In 2010, UW System institutions received \$35.0 million in federal stimulus funds for the construction of networks that will provide internet connections to UW System institutions and other entities.

2011 Wisconsin Act 32 made statutory changes affecting the provision of telecommunications services by UW System institutions and their involvement with WiscNet and the grant-funded networks. Because UW System's future plans for obtaining internet services and its future role in the grant-funded networks have not been finalized, we could not assess its compliance with Act 32 at the present time. Therefore, continued monitoring will be necessary.

We appreciate the courtesy and cooperation extended to us by UW System, WiscNet and its members, the Department of Administration, and commercial telecommunications providers in completing this evaluation. UW System's response follows the appendices.

Respectfully submitted,


Joe Chrisman
State Auditor

JC/PS/ss

Report Highlights ■

WiscNet is funded primarily by fees charged to its members.

Inadequate documentation prevented us from determining whether all payments made between WiscNet and UW System institutions were sufficient and appropriate.

Most UW System institutions and other WiscNet members use BadgerNet to obtain connections to WiscNet's network.

2011 Wisconsin Act 32 made statutory changes affecting the involvement of UW System in WiscNet and grant-funded networks.

WiscNet is a private, membership-based nonprofit association of public and private organizations that provides internet service and other services to its members for research and educational purposes. As of June 2012, WiscNet membership totaled 483 organizations, including University of Wisconsin (UW) System institutions, state technical colleges, public library systems, counties, municipalities, private colleges, hospitals, and three-fourths of Wisconsin's public school districts. In addition, UW System has been involved in obtaining \$35.0 million in federal grant funds to support the construction of broadband networks, which include the infrastructure needed to transport large amounts of data.

Some have questioned whether UW System's involvement in WiscNet and the grant-funded networks resulted in financial subsidies or other benefits that provided WiscNet with a competitive advantage over commercial providers. 2011 Wisconsin Act 32, the 2011-13 Biennial Budget Act, directed the Legislative Audit Bureau to evaluate UW System's use of broadband services and its relationship with WiscNet. In completing our work, we reviewed:

- the creation, governance, and operations of WiscNet;
- the services WiscNet provides to its members;
- price comparisons between WiscNet and commercial providers;

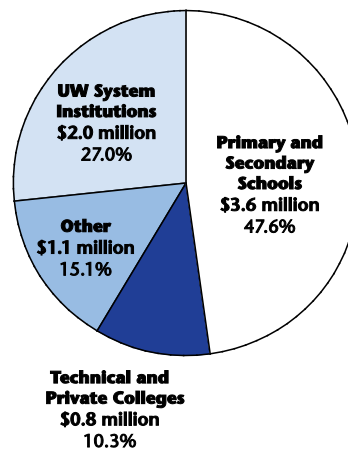
- UW System’s acquisition and use of network infrastructure, including its role in obtaining federal funding for construction of new grant-funded networks; and
- the future role of UW System in WiscNet and grant-funded networks.

WiscNet Operations

WiscNet is funded primarily by fees charged to its members. These fees accounted for \$7.5 million, or 93.6 percent, of WiscNet’s total FY 2010-11 revenue. Primary and secondary schools provided 47.6 percent of WiscNet’s fee revenue, as shown in Figure 1.

Figure 1

WiscNet Fee Revenue
FY 2010-11



In FY 2010-11, WiscNet paid UW System institutions \$1.4 million for goods and services, including network engineering and monitoring services and network infrastructure needed for WiscNet to provide internet service to its members. UW-Madison served as WiscNet’s fiscal agent, which involved processing financial transactions, as well as providing accounting, billing, purchasing, and human resources services. Although WiscNet paid the salary and fringe benefit costs of its employees, all WiscNet staff are employed by UW System institutions.

UW System Administration makes payments to WiscNet to cover a portion of the fees WiscNet charges to UW System institutions. In June of three consecutive fiscal years, UW System Administration made a total of \$2.3 million in additional payments to WiscNet in excess of the cost of services UW System institutions received, which officials indicate were prepayments for WiscNet services to be provided in future years. We question these excess payments because they are noncompliant with statutes that generally prohibit state agencies, including UW System, from using funds allocated through annual appropriations to pay for services to be provided in future years.

Price Comparisons

WiscNet offers internet service at prices that are generally lower than commercial providers. Based on estimates provided to us by 32 WiscNet members, they would have paid commercial providers an average of \$1,161 per month in FY 2011-12 to obtain bandwidth comparable to that which they received through WiscNet. This is more than twice the \$497 per month these members paid, on average, in internet service and membership fees through WiscNet.

We identified several factors that likely contribute to WiscNet's ability to charge lower fees. For example, WiscNet does not incur all of the operating costs that many commercial providers do, including fees paid to transmit data across other networks and advertising expenses. As a nonprofit entity, WiscNet also does not need to generate a profit and is exempt from paying income taxes.

In addition, the lack of sufficient written agreements between UW-Madison and WiscNet for the provision of goods and services and imprecise estimates of the actual costs of those goods and services lead us to question the adequacy of reimbursements. For example, a 1999 agreement did not specify the amount UW-Madison would charge WiscNet for network engineering services, and the costs UW-Madison incurred in providing additional network engineering services to WiscNet under a 2007 agreement, which continues to guide the provision of these services, consistently exceeded the amount specified under the agreement. UW-Madison officials stated that they have not attempted to renegotiate the price of engineering services under the 2007 agreement because they believe that the amount WiscNet paid for the use of UW System's network infrastructure was sufficient to offset UW-Madison's unreimbursed costs.

Providing Connections to the Internet

In order to obtain internet service, WiscNet's members must obtain their own connections to its network. Most UW System institutions and other WiscNet members obtain these connections through BadgerNet, a state-supported network operated by a consortium of private telecommunications companies. Although most UW System institutions have historically used BadgerNet in connecting to the internet, UW System has determined that it is less costly to lease infrastructure to develop its own network. Since FY 2010-11, the expansion of UW System's network has increased bandwidth capacity at six of its institutions while reducing annual connection expenses by an estimated \$370,000.

In 2010, UW-Madison and UW-Extension were awarded federal grants totaling \$35.0 million to support the construction of network infrastructure in the Chippewa Valley, Platteville, Superior, Wausau, and the Madison area. These projects are intended to create community area networks to provide internet connections for UW System institutions, public school districts, local governments, and health care organizations.

Prices anticipated to be charged for internet connections from these networks are lower than the prices charged by BadgerNet or other providers. This is possible, in part, because significant network costs, such as equipment and construction, will be paid with federal grant funds.

UW System institutions are overseeing the construction of the grant-funded networks and also plan to participate in their governance. Plans for UW System to own a portion of the network infrastructure, and for UW System institutions to provide technical support to grant-funded networks, are viewed by officials as extensions of UW System's mission. However, those roles may be viewed by some as conflicting with a statutory prohibition on UW System providing telecommunications services.

UW System's Future Role

Act 32 made statutory changes affecting the involvement of UW System in WiscNet and the grant-funded networks, some of which first take effect on July 1, 2013. To comply with Act 32, UW System institutions plan to discontinue their WiscNet memberships and make alternative arrangements to obtain internet service. One such arrangement, which would achieve compliance with statutory prohibitions on offering, reselling, or providing telecommunications services to entities outside of UW System, is for

UW System to provide internet services directly and exclusively to its own institutions. However, UW System officials do not view this as a preferred option, in part because they believe it would likely result in increased costs for UW System institutions and may adversely affect their connections with other research and education networks.

Alternatively, UW System could contract with a vendor to provide internet services to its institutions. UW System officials indicate they may consider issuing a request for proposals to serve its institutions that also assesses the vendor's willingness to provide services to all WiscNet members at comparable prices. However, if a vendor provides services to all WiscNet members and if UW System allows a vendor to access UW System's infrastructure and network monitoring services, the resulting arrangement could be comparable to the existing relationship between UW System and WiscNet.

Because UW System's future plans for obtaining internet services and its future role in the grant-funded networks have not been finalized, we could not assess its compliance with Act 32 at the present time. Therefore, continued monitoring will be necessary.

Recommendations

We recommend UW System Administration:

- ☑ recover by June 30, 2013, any balance remaining from the \$2.3 million in excess payments it made to WiscNet and, in compliance with state law, lapse the amount recovered to the General Fund as a refund of expenditures (*p. 20*);
- ☑ report to the Joint Legislative Audit Committee by July 1, 2013, on its plans for obtaining internet services, including the identification of any vendors selected to provide services and the use of UW System resources by vendors or outside entities (*p. 58*); and
- ☑ report to the Joint Legislative Audit Committee by October 1, 2013, on the extent to which UW System institutions provide support to the grant-funded networks, own network infrastructure, or have transferred, or plan to transfer, infrastructure ownership to any other entity (*p. 61*).

We also recommend that UW-Madison:

- ☑ seek reimbursement from WiscNet for unbilled fringe benefit costs related to services it provided to WiscNet (*p. 32*); and
- ☑ improve the procedures it uses when entering into fixed-price agreements (*p. 34*).

■ ■ ■ ■

Introduction ■

WiscNet is an unincorporated nonprofit research and education association that was formed in 1990.

WiscNet is an unincorporated nonprofit research and education association that was formed in 1990 in response to a National Science Foundation grant that assisted colleges and universities to connect to research and education networks, as well as the internet. The founding members of WiscNet were the federal grant applicants and included all UW System institutions, Beloit College, Carroll University, Edgewood College, Lawrence University, Marquette University, the Medical College of Wisconsin, Ripon College, and St. Norbert College. From 1990 through 1995, WiscNet received \$1.3 million in federal grants, which it used primarily to purchase the equipment needed to access research and education networks and the infrastructure needed to transport data.

As designated in its first grant application, administrative and organizational responsibilities for WiscNet were originally vested in two principal investigators at UW-Madison, including a member of the Computer Sciences faculty and an information technology staff member. In 1992, WiscNet became a tax-exempt nonprofit organization under section 501(c)(3) of the Internal Revenue Code. All 501(c)(3) organizations are exempt from paying income taxes, but they are required to file a publicly available tax return with the Internal Revenue Service.

WiscNet Membership and Governance

Although WiscNet's membership originally consisted entirely of higher education institutions, it has grown to include primary and secondary schools, public libraries, counties, municipalities, and other organizations. Although detailed information on historical

WiscNet membership is not available, the largest growth occurred from 1996 through 2001, when membership grew from 65 members to approximately 500 members. A primary cause of that growth was the establishment of federal funding to subsidize the cost of telecommunications services, including internet service, for public school districts, private schools, and public libraries. This funding, which is more commonly known as “E-rate,” is provided by the Schools and Libraries program of the federal Universal Service Fund, which was authorized by the Telecommunications Act of 1996.

In June 2012, 64.6 percent of WiscNet’s 483 members were public school districts.

WiscNet’s membership has been relatively stable over the past decade. In June 2012, WiscNet had 483 members. As shown in Table 1, public school districts comprised 64.6 percent of its membership.

Table 1
WiscNet Membership, by Type
June 2012

Member Type	Number	Percentage of Total
Public School Districts	312	64.6%
UW System Institutions ¹	28	5.8
Counties	22	4.6
Private Colleges and Universities	21	4.3
Other Primary and Secondary Schools ²	21	4.3
Public Libraries ³	17	3.5
Technical Colleges	17	3.5
Municipalities	13	2.7
Cooperative Educational Service Agencies (CESAs)	12	2.5
Health Care Organizations	6	1.3
State Agencies ⁴	5	1.0
Other ⁵	9	1.9
Total	483	100.0%

¹ Includes the 13 four-year institutions, the 13 two-year institutions, UW-Extension, and UW System Administration.

² Includes 17 private primary and secondary schools, two county-administered special education programs, the Wisconsin School for the Deaf, and the Wisconsin Center for the Blind and Visually Impaired.

³ Includes 15 of Wisconsin’s 17 public library systems and the public libraries in the cities of Fond du Lac and Kenosha.

⁴ Includes DOA, which provides most other state agencies, the Legislature, and the Wisconsin Court System with internet service; the State of Wisconsin Investment Board; and the departments of Military Affairs, Public Instruction, and Transportation.

⁵ Includes other networks with which WiscNet has a working relationship; the Milwaukee Public Museum; the Wisconsin Economic Development Corporation; and private, nonprofit organizations.

All state agencies, the Legislature, and the Wisconsin Court System obtain internet service through WiscNet.

In June 2012, 73.6 percent of Wisconsin's 424 school districts were WiscNet members. WiscNet's membership also included all of Wisconsin's technical colleges, all UW System institutions, 15 of Wisconsin's 17 public library systems, and 22 of Wisconsin's 72 county governments. In addition, all state agencies, the Wisconsin Legislature, and the Wisconsin Court System obtain internet service through WiscNet. However, they generally are not counted by WiscNet as separate members because most obtain their internet service through the Department of Administration's (DOA's) membership rather than directly through their own WiscNet memberships.

In June 2012, UW System institutions held three seats on WiscNet's 11-member board of directors.

Organizations must apply for membership, which may be granted by an affirmative vote of at least two-thirds of WiscNet's board of directors. There are 11 seats on WiscNet's board, in which all of the authority and powers of the organization are vested under its bylaws, including approval of its annual budget. In June 2012, 6 of the 11 seats were designated to be held by a representative of a particular membership type or entity, including:

- UW-Madison;
- UW-Milwaukee,
- UW System Administration;
- Wisconsin's public and private primary and secondary schools;
- Wisconsin's private colleges and universities; and
- the Wisconsin Technical College System.

WiscNet's bylaws prohibit any one membership type from obtaining a majority of seats on its board of directors.

The remaining five seats are elected from WiscNet's entire membership for staggered, three-year terms and may represent either members that do not already have designated representation on the board or those that do. WiscNet's bylaws prohibit any one membership type, such as primary and secondary schools, from obtaining a majority of seats. In June 2012, the five seats were held by employees of:

- CESA 10;
- Chippewa Valley Technical College;
- the Department of Public Instruction;
- the School District of La Crosse; and
- Wisconsin Valley Library Service, which is a public library system.

Since 1995, WiscNet has had an executive director who develops goals, implements marketing plans, and coordinates and implements management and fiscal operations. An associate director and an operations services manager are responsible for managing day-to-day WiscNet operations. In June 2012, WiscNet had 21.1 full-time equivalent (FTE) staff.

Fees and Services

WiscNet's bylaws state that its members are collectively responsible for financing the organization and allow WiscNet to establish appropriate fees for the services it provides. WiscNet members are required to pay an annual membership fee of \$1,000.

WiscNet provides internet service, but its members must obtain their own connections to WiscNet's network.

The main service WiscNet provides is internet service through statewide network infrastructure composed of UW System's optical fiber and the equipment needed to make connections to other regional, national, and international networks in Chicago and Kansas City. These connections allow WiscNet members to use the commercial internet as well as Internet2, which is a high-capacity national research and education network. Members pay a fee for internet service based on their type and size. For example, annual internet service fees range from \$5,000 to \$96,400 per year for public school districts and \$6,000 to \$780,000 per year for higher education institutions. DOA pays a total of \$175,000 per year on behalf of most state agencies, the Legislature, and the Wisconsin Court System. WiscNet members must obtain their own connections to its network, because WiscNet does not provide this service.

In addition to internet service, members may purchase other services from WiscNet, such as:

- e-mail services, including spam and virus filtering;
- security services, including a managed firewall;
- web services, including the tools needed to filter internet content in order to prevent inappropriate or unlawful use;
- network storage, including off-site data storage; and
- consulting services.

Appendix 1 shows the services available to WiscNet members in FY 2011-12 and the fees charged by WiscNet for each service, and it also indicates whether each service fee was eligible for a federal E-rate subsidy.

In addition to the services for which it charges separate fees, WiscNet provides general technical support and education to its members as part of their annual membership and internet service fees. WiscNet has 3.0 FTE technical support staff who spend a portion of their time providing customer support and troubleshooting by telephone and email when WiscNet members have difficulty with WiscNet services.

WiscNet also has 2.0 FTE staff who facilitate work groups and develop and promote educational resources for WiscNet members. For example, these staff provide a monthly webinar, a regularly updated blog, an occasional newsletter, and a weekly podcast. They are also involved in the development of WiscNet's annual two-day conference, and they assist educational institutions in identifying WiscNet services that may be of benefit to them.

2011 Wisconsin Act 32 places a number of restrictions on UW System institutions that will affect their future relationship with WiscNet and potentially other internet service providers. For example, beginning on July 1, 2013, Act 32 prohibits UW System institutions from being members, shareholders, or partners in any third-party entity that offers, resells, or provides a range of telecommunications services, such as internet access, to other public or private entities.

■ ■ ■ ■

WiscNet Operations ■

Although WiscNet has been established as a membership-based nonprofit organization, its day-to-day operations are integrated with those of UW System institutions, primarily UW-Madison. As required by Act 32, we analyzed WiscNet's financing, staffing, and administration in the context of its relationship with UW System.

WiscNet Revenue and Expenses

WiscNet is funded primarily by fees charged to its members.

WiscNet is funded primarily by fees charged to its members. As shown in Table 2, WiscNet's total revenue increased from \$6.2 million in FY 2007-08 to \$10.0 million in FY 2011-12, or by 61.3 percent. The increase in revenue is the result of several factors, of which the largest is the receipt of federal grant funds through UW System institutions related to construction of network infrastructure. These grants are discussed further in subsequent chapters of this report.

We analyzed detailed information on WiscNet's revenue for FY 2010-11, which was the most recently completed fiscal year at the time of our fieldwork. Revenue generated from WiscNet members, including service and membership fees, accounted for \$7.5 million, or 93.6 percent, of WiscNet's FY 2010-11 revenue. Internet service fees paid by members totaled \$6.1 million and accounted for 76.6 percent of WiscNet's total revenue. In FY 2010-11, WiscNet also received \$509,800 from others, including federal grant funds and reimbursements from out-of-state universities for the use of WiscNet's connections in Chicago and Kansas City.

Table 2

WiscNet Revenue

Fiscal Year	Total Revenue	Percentage Change
2007-08	\$6,221,300	–
2008-09	6,340,700	1.9%
2009-10	7,517,400	18.6
2010-11	8,009,200	6.5
2011-12	10,032,300	25.3

In FY 2010-11, nearly half of WiscNet's member revenue was provided by primary and secondary schools.

As shown in Table 3, primary and secondary schools provided 47.6 percent of the revenue generated from members in FY 2010-11, while UW System institutions provided 27.0 percent.

Table 3

WiscNet Revenue, by Member Type
FY 2010-11

Member Type	Amount	Percentage of Total
Primary and Secondary Schools	\$3,568,600	47.6%
UW System Institutions	2,026,500	27.0
Other ¹	514,300	6.8
Technical Colleges	453,800	6.0
Private Colleges and Universities	321,000	4.3
Public Libraries	169,800	2.3
Counties	163,800	2.2
CESAs	136,200	1.8
Health Care Organizations	79,400	1.1
Municipalities	66,000	0.9
Total	\$7,499,400	100.0%

¹ Includes state agencies; the Milwaukee Public Museum; the Wisconsin Economic Development Corporation; and private, nonprofit organizations.

Table 4 shows WiscNet's operating expenses over the past five years. The 12.5 percent decrease in expenses in FY 2009-10 is primarily the result of a temporary decline in WiscNet's purchases of equipment and software, as well as accounting for the total annual salary and fringe benefit payments for two WiscNet employees in FY 2010-11 for work performed in FY 2009-10. The 57.9 percent increase in FY 2011-12 expenses is largely the result of the expenditure of federal grant funds related to assisting in the construction of network infrastructure.

Table 4

WiscNet Operating Expenses

Fiscal Year	Amount	Percentage Change
2007-08	\$5,870,800	–
2008-09	6,018,500	2.5%
2009-10	5,263,200	(12.5)
2010-11	5,875,700	11.6
2011-12	9,280,000	57.9

The largest share of WiscNet's FY 2010-11 expenses were for the salaries and fringe benefits of staff.

We analyzed detailed information on WiscNet's operating expenses for FY 2010-11, which was the most recently completed fiscal year at the time of our fieldwork. As shown in Table 5, the largest share of WiscNet's FY 2010-11 expenses (33.8 percent) were for the salaries and fringe benefits of its staff, who were responsible for a wide range of activities such as organizational management, development of new services, and technical support for members. Other operating expenses included:

- equipment and software purchases;
- depreciation, which represents the allocation of the cost of long-term assets over their projected lifespan;
- infrastructure expenses for network components, such as optical fiber;
- network engineering services purchased from UW-Madison's Division of Information Technology, which include activities such as adding and removing network users and installing network equipment;

- connections to other networks in Chicago and Kansas City in order to provide its members with internet service; and
- network monitoring services purchased from the Division of Information Technology, which include staff time and equipment devoted to detecting problems in WiscNet’s network.

In FY 2010-11, WiscNet purchased \$1.8 million in capital equipment, such as major networking routers and central network hardware. These costs will be depreciated during future years.

Table 5

WiscNet Operating Expenses, by Category
FY 2010-11

Expense Category	Amount	Percentage of Total
Salaries and Fringe Benefits for WiscNet Employees	\$1,988,500	33.9%
Equipment and Software Purchases	1,136,600	19.3
Depreciation	682,700	11.6
Infrastructure Expenses	500,000	8.5
Network Engineering Services	450,000	7.7
Connections to Other Networks	323,400	5.5
Network Monitoring Services	218,000	3.7
Other ¹	194,400	3.3
Data Backup and Storage	125,400	2.1
Office Space Rental	119,600	2.0
Administrative Support Services ²	80,400	1.4
Travel and Training	56,700	1.0
Total	\$5,875,700	100.0%

¹ Includes office supplies, printing, shipping and postage, conference facilities, fleet and parking, and memberships and subscriptions.

² Includes accounting, billing, human resources, purchasing, and contract support services.

In FY 2010-11, WiscNet paid UW System institutions \$1.4 million for goods and services.

Historically, WiscNet has purchased several types of goods and services from UW-Madison and other UW System institutions. Excluding salaries and fringe benefits for WiscNet employees, \$1.4 million of WiscNet’s \$5.9 million in FY 2010-11 operating expenses (23.7 percent) were payments to UW System institutions for goods and services, including all of its expenses for network

engineering services, network monitoring services, and data backup and storage, as well as the majority of its expenses for network infrastructure.

Excess Payments to WiscNet

UW System Administration makes payments to WiscNet to cover a portion of the fees WiscNet charges to UW System institutions. However, in June of three consecutive fiscal years UW System Administration made additional payments to WiscNet in excess of the cost of services UW System institutions received in those years. The excess payments, for which UW System Administration was billed at its request, totaled \$2.3 million from FY 2007-08 through FY 2009-10. UW System Administration officials indicate that the excess payments represented “prepayments” for WiscNet services to be provided to UW System institutions in future years.

As shown in Table 6, the balance resulting from the excess payments grew from \$861,000 in FY 2007-08 to \$1.8 million in FY 2009-10, and then decreased to \$957,000 in FY 2011-12 as WiscNet applied some of the funds to offset charges for the services it provided to UW System institutions in FY 2010-11 and FY 2011-12.

Table 6

UW System Balance in WiscNet Account

Fiscal Year	Beginning Balance	Funds Applied Toward Services	Prepayment	Ending Balance
2007-08	–	–	\$861,000	\$ 861,000
2008-09	\$ 861,000	–	726,000	1,587,000
2009-10	1,587,000	\$(474,267)	725,000	1,837,733
2010-11	1,837,733	(479,815)	–	1,357,918
2011-12	1,357,918	(401,251)	–	956,667

We question \$2.3 million in excess payments UW System Administration made from annual appropriations to pay WiscNet for future services.

UW System Administration made the payments from two annual general purpose revenue (GPR) appropriations, including an appropriation for educational technology services and an appropriation for general program operations. We question these excess payments because they are noncompliant with statutes, which generally prohibit state agencies, including UW System, from using funds allocated through annual appropriations to pay for services to be provided in future years.

Based on the restrictions imposed by Act 32, UW System institutions will be required to discontinue their current relationships with WiscNet by July 1, 2013. However, based on UW System's expenditures for WiscNet services in recent years, UW System may have a remaining balance with WiscNet of approximately \$450,000 by the end of FY 2012-13 for services not provided.

Recommendation

We recommend UW System Administration recover by June 30, 2013, any balance remaining from the \$2.3 million in excess payments it made to WiscNet for services to be provided to UW System institutions in future years and, in compliance with state law, lapse the amount recovered to the General Fund as a refund of expenditures.

Administrative Relationship between WiscNet and UW-Madison

UW-Madison's Division of Information Technology serves as the fiscal agent for WiscNet.

WiscNet has an administrative relationship with UW-Madison's Division of Information Technology based on its role as WiscNet's fiscal agent, which includes the provision of administrative support services and the employment of WiscNet staff.

WiscNet's bylaws require that its board appoint a fiscal agent responsible for collection, custody, and disbursement of WiscNet funds. UW-Madison's Division of Information Technology has served in this role since WiscNet was founded. UW-Madison staff maintain WiscNet's financial records and process all of WiscNet's financial transactions using UW-Madison's accounting system and procedures. In order to keep WiscNet's finances separate from other activities, UW-Madison assigns WiscNet's financial transactions a unique accounting code and identifies WiscNet as a university department within UW-Madison's accounting system. Because its revenue and expenditures are reported in UW-Madison's financial statements, the financial and organizational differences between the two entities are less distinct.

In addition to processing financial transactions, UW-Madison provides WiscNet with a variety of other administrative services.

The contract outlining the provision of fiscal agent services by UW-Madison to WiscNet expired in June 1992. However, the contract provided for extension by mutual consent and the parties continue to follow some of the provisions of the expired contract, under which UW-Madison maintains financial records and processes financial transactions, as well as provides a range of administrative support services, such as:

- billing, which includes invoicing WiscNet members and collecting their payments;
- accounting, which includes bookkeeping and preparing WiscNet's 501(c)(3) tax filings;
- purchasing, which includes the use and administration of state purchasing cards and procurement of goods and services through state and university purchasing contracts;
- human resources, which includes developing position descriptions and posting recruitment information; and
- contracting support, which includes developing new contracts for goods and services.

In FY 2010-11, WiscNet's payments to UW-Madison for these administrative support services totaled \$80,400. UW-Madison officials indicated that they based the charges for each service on estimates of the cost of the service to UW-Madison. For example, they indicated that charges for human resources services were to be based on a prorated share of the Division of Information Technology's total human resources costs.

Staffing

Although WiscNet is established as a nonprofit organization and it pays salary and fringe benefits for its staff from its own funds, all WiscNet staff are employed by UW System institutions. WiscNet and UW-Madison officials indicated that this arrangement is the result of UW-Madison's role as the fiscal agent for WiscNet, in particular its provision of human resources services and its responsibility for processing WiscNet's disbursements.

WiscNet pays the salaries and fringe benefit costs for its staff, who are all employed by UW System institutions.

As shown in Table 7, the number of WiscNet staff increased from 19.3 FTE in June 2008 to 21.1 FTE in June 2012. In June 2012, 19.6 of the 21.1 FTE staff were employed by UW-Madison, but their salaries and fringe benefits were paid with WiscNet funds. In addition, 1.0 FTE staff member was employed by UW-Extension and a 0.5 FTE staff member by UW System Administration. These staff work for WiscNet through inter-institutional agreements between those institutions and UW-Madison. These agreements, which allow one institution or department to provide staff to another institution or department, require WiscNet to pay the salary and fringe benefit costs of the 1.5 FTE employees. We verified that payments were made for all WiscNet staff members from FY 2007-08 through FY 2011-12.

Table 7

WiscNet Full-time Equivalent Staff

	June 2008	June 2012
WiscNet Staff Employed by UW-Madison		
Permanent Employees	14.0	15.5
Limited-term Employees	2.0	2.0
Student Employees ¹	1.8	2.1
Subtotal	17.8	19.6
WiscNet Staff Employed by Other UW System Institutions		
Permanent Employees	1.5	1.5
Total	19.3	21.1

¹ Represents estimates for June of each year based on an average of time records for each respective fiscal year.

Because all WiscNet staff are employed by UW System institutions, the positions are posted and hired through UW System human resources procedures; the staff are included in university payroll systems; and permanent staff receive the same package of fringe benefits as other permanent university employees, including participation in the Wisconsin Retirement System.

The employment of WiscNet staff by UW System institutions obscures the distinction between the two entities.

The employment of WiscNet staff by UW System institutions further obscures the distinction between the two entities, especially with respect to the role of the executive director. According to WiscNet’s bylaws, its executive director is expected to carry out the orders and resolutions of the board. However, because WiscNet’s executive director is an employee of UW-Madison, that institution’s officials have the power to discipline or terminate the executive director. This presents a potential conflict of interest that could make it difficult for the executive director to independently fulfill responsibilities to WiscNet’s board should the board’s opinions or directives differ from those of UW-Madison officials. Representatives of WiscNet and UW-Madison indicate that the relationship has never been an issue because they view their interests as complementary and believe it is unlikely their views would diverge sufficiently to present an actual conflict.

UW System's Relationships with Other Nonprofit Organizations

In addition to WiscNet, UW System institutions also have relationships with other 501(c)(3) nonprofit organizations, including:

- The UW Foundation, which serves as the main fundraising organization for UW-Madison;
- The Wisconsin Alumni Research Foundation (WARF), which supports research at UW-Madison by patenting research-based discoveries, licensing the patented discoveries to the private sector, and distributing licensing proceeds to support research;
- UW Hospital and Clinics, which was established by 1995 Wisconsin Act 27 as an independent public authority;
- University Research Park, which leases office space to companies selling goods and services that are derived from UW-Madison research; and
- The Wisconsin Humanities Council, which was established in 1972 as an independent affiliate of the National Endowment for the Humanities and provides financial and administrative support to programs, such as book festivals and museum tours, throughout the state.

UW-Extension's fiscal agent relationship with the Wisconsin Humanities Council is similar to UW-Madison's relationship with WiscNet.

The Wisconsin Humanities Council has a fiscal agent relationship with UW-Extension that is similar to WiscNet's fiscal agent relationship with UW-Madison. Council staff indicate that they have contracted with UW-Extension to process the Council's financial transactions for more than 30 years. Council staff are employed by UW-Extension and receive the same package of fringe benefits as other university employees. The Council receives administrative support services, including purchasing and human resources services, from UW-Extension for which it paid a total of \$7,500 in FY 2011-12. In addition to receiving administrative support from UW-Extension, the Council paid \$12,500 in FY 2011-12 for technical support services from UW-Madison's Division of Information Technology.

The four other nonprofit organizations do not have fiscal agent relationships with a UW System institution and account for their finances separately. However, each organization purchased goods and services from UW-Madison in FY 2011-12. For example, all four

organizations indicate that they purchased internet, technical support, or telephone services through UW-Madison's Division of Information Technology. UW Hospital and Clinics and WARF report paying UW-Madison for utilities and maintenance, and UW Hospital and Clinics purchased additional goods and services that included office supplies, bulk mailing services, and computer software. In addition, two of the four organizations share certain characteristics of WiscNet's relationship with UW-Madison:

- University Research Park employees are employees of UW-Madison who appear in university records, are hired through university procedures, and receive the same fringe benefits as university employees.
- Statutes entitle employees of UW Hospital and Clinics to receive the same fringe benefits provided to all state employees, even though most of its staff are employed by the independent hospital authority.

Most nonprofit organizations associated with UW System do not produce goods and services sold in competition with commercial providers.

Although these other nonprofit organizations have relationships with UW System that are similar to WiscNet, most do not produce goods and services that are sold in competition with commercial providers. Moreover, the entity that does sell commercially available services, UW Hospital and Clinics, has a statutory authorization for its relationship with UW System that WiscNet does not.

Research and Education Networks in Other States

Research and education networks similar to WiscNet serve educational and governmental users in other states.

Research and education networks, such as WiscNet, were developed in many states during the 1980s and 1990s to provide research universities with high-bandwidth internet services, and many of those networks have expanded over time to offer services to other educational and governmental users. According to a 2011 report by the Bill and Melinda Gates Foundation, 38 states have research and education networks, including Wisconsin. We collected information on eight other research and education networks that offer internet services similar to those provided by WiscNet and that serve a similar range of customers, including statewide networks in the surrounding states of Illinois, Iowa, Michigan, and Minnesota, as well as those in California, Missouri, North Carolina, and Ohio. With the exception of California and Minnesota, networks in these states serve colleges, universities, primary and secondary schools, public libraries, state agencies, and health care organizations. California's network does not serve public libraries, state agencies,

or health care organizations. Minnesota’s network does not serve health care organizations. Table 8 shows the type of organization responsible for administering research and education networks in other states, as well as the entity responsible for providing administrative and network operations services.

Table 8
Selected Research and Education Networks in Other States
 2012

State	Type of Organization	Provision of Administrative and Network Operations Services
California	Nonprofit Entity	Performed by nonprofit employees ¹
Illinois	State Agency	Performed by state agency employees
Iowa	State Agency	Performed by state agency employees
Michigan	Nonprofit Entity	Contract with University of Michigan for some administrative and financial services; network operations performed by nonprofit employees ²
Minnesota	State/University Partnership	Performed by state and university employees
Missouri	University Affiliated	Performed by university employees ³
North Carolina	Nonprofit Entity	Performed by nonprofit employees
Ohio	University Affiliated	Performed by university employees
Wisconsin (WiscNet)	Nonprofit Entity	Performed by UW-Madison employees and reimbursed by WiscNet

¹ California’s research and education network contracts with a private accounting firm for some large projects.

² Historically, some of Michigan’s research and education network operations were performed by University of Michigan employees.

³ Missouri’s research and education network contracts with private vendors for some network maintenance services.



UW System's Role in WiscNet Services ■

Concerns have been raised about whether WiscNet's ability to charge less for internet service than commercial providers may be the result of financial subsidies or other competitive advantages gained through its relationships with UW System institutions. To evaluate these concerns, we assessed the factors influencing the selection of an internet service provider, compared internet service fees for WiscNet members to available price information from commercial providers, and analyzed available data to help explain the price differences.

Factors Influencing the Selection of an Internet Service Provider

We surveyed public entities typically served by WiscNet, including some who were WiscNet members.

To understand the factors involved in choosing an internet service provider, we conducted a survey of information technology managers at public school districts, county governments, private colleges and universities, technical colleges, public library systems, and CESAs. Of the 310 responses we received, 228 (73.5 percent) reported that WiscNet was their internet service provider. The other 82 respondents reported using a variety of commercial internet service providers, such as telephone and cable companies.

Respondents were asked to rate the importance of several different factors in their decision to select a provider on a five-point scale ranging from "not important" to "very important." More than three-quarters of respondents reported that the cost of services was very important to their decision. However, WiscNet members reported more frequently than other respondents that other factors

were also very important. For example, 87.2 percent of responding WiscNet members cited the reliability of WiscNet's services, including its ability to prevent temporary losses of internet service, and 79.4 percent cited the quality of WiscNet's technical support. Additional information on the survey's results is provided in Appendix 2.

WiscNet's members reported that the cost of services and amount of available bandwidth influenced their selection of a provider.

More than three-quarters of responding WiscNet members also reported that the available bandwidth, which determines the amount of information users can download from the internet and the speed at which it can be downloaded, was very important to their decision to select WiscNet. Members attributed those advantages to WiscNet's practice of allowing members to use as much bandwidth as they are capable for a flat fee. In contrast, the standard practice among commercial providers is to charge customers a fee for the ability to use a set amount of bandwidth.

Determining Price Differences between WiscNet and Commercial Providers

To determine the extent of price differences between WiscNet and commercial providers, we asked the WiscNet members we surveyed to provide us with any documented service estimates they had received from commercial providers during FY 2011-12. Based on estimates provided to us by 32 members, they would have paid commercial providers an average of \$1,161 per month in FY 2011-12 to obtain comparable bandwidth. This is more than twice the \$497 per month these members paid, on average, in internet service and membership fees through WiscNet.

We also compared WiscNet fees to the published prices of three commercial internet service providers whose services are made available to WiscNet members statewide. We based our comparisons on the bandwidth available to 175 WiscNet members in April 2012 that were eligible to receive services from the three commercial providers.

Table 9 shows the average monthly charges for these WiscNet customers in FY 2011-12 compared to the published prices for internet service from the three commercial providers. WiscNet members would have paid more than twice as much, on average, for comparable bandwidth from two of the commercial providers, Solarus and Infinity. For the third provider, AT&T, WiscNet members would have paid more than twice as much for service under a two-year service commitment, but an average of 24.5 percent more under a three-year service commitment. We note that the published commercial prices are "not-to-exceed prices" that the provider may reduce for some customers. More than half of the survey respondents who received estimates from those providers indicated that their estimates did not include reductions from the published price.

Table 9

Comparison of Monthly WiscNet Internet Service Fees and Published Commercial Prices¹
 FY 2011-12

Provider	Average Monthly Charge ²	Difference from WiscNet	Percentage Greater than WiscNet
WiscNet ³	\$ 477	–	–
AT&T (3-year commitment)	594	\$117	24.5%
Solarus	1,027	550	115.3
Infinity	1,127	650	136.3
AT&T (2-year commitment)	1,188	711	149.1

¹ Based on the April 2012 available bandwidth to the 175 WiscNet members eligible to receive services from the three commercial providers.

² Includes any discounts members received through federal E-rate subsidies.

³ Includes internet service fees and WiscNet membership fees.

In FY 2011-12, WiscNet fees were substantially lower than published commercial prices for high-bandwidth service.

The price differences for individual users varied based on the amount of bandwidth. For example, the FY 2011-12 published prices from some commercial providers were lower than WiscNet’s for bandwidths of 20 megabits per second (Mbps) or less. However, the commercial providers’ published prices were consistently higher than WiscNet’s fees for bandwidths higher than 20 Mbps, and the difference in price increased as the amount of bandwidth increased. WiscNet fees were, on average, \$84 per month lower than documented service estimates for the 11 respondents who reported having bandwidths of 30 Mbps or less and \$1,124 per month lower than documented service estimates for the seven survey respondents who reported having bandwidths of 70 Mbps or more. As noted, this is largely due to WiscNet’s practice of allowing members to use as much bandwidth as they are able for a flat fee, rather than charging higher fees for increased bandwidth usage.

Because price differences between WiscNet and commercial providers are largely based on bandwidth usage, we reviewed bandwidth usage data for public school districts, library systems, state technical colleges, private colleges and universities, and county governments served by WiscNet. We analyzed each member’s peak bandwidth usage, excluding the highest temporary spikes in usage. This approach is commonly used to assess bandwidth needs because it provides an accurate measure of a member’s maximum bandwidth needs while not overstating need based on brief spikes in usage.

Between 2009 and 2012, average bandwidth usage grew by more than 300 percent among school districts served by WiscNet.

Average peak bandwidth usage doubled for each type of WiscNet user from the first quarter of 2009 through the first quarter of 2012. School districts experienced the largest growth, with an increase of more than 300 percent, from 6.3 Mbps in March 2009 to 26.6 Mbps in March 2012. Over this period, the number of school districts with peak usage of more than 20 Mbps increased from 6 districts in the first quarter of 2009 to 143 districts in the first quarter of 2012, while the number of districts with peak usage of more than 50 Mbps increased from 2 to 23. It should be noted that these estimates likely understate peak usage, partly because the available data include usage during nights and weekends, which are periods of low usage for most users.

WiscNet members have attributed growth in bandwidth usage to several factors, including the development of enhanced internet technologies such as video streaming, the increased use of online databases for administrative functions such as payroll, and the increased use of personal internet devices such as iPads. These factors are expected to drive continued growth in bandwidth needs in the future.

Explaining Price Differences between WiscNet and Commercial Providers

Several factors help to explain WiscNet's ability to charge lower fees.

We identified several factors that likely contribute to WiscNet's ability to charge fees that are generally lower than those charged by commercial providers, such as lower operating costs and its nonprofit status. In addition, inadequate documentation prevented us from determining whether certain payments made by WiscNet to UW System institutions were sufficient and appropriate.

WiscNet does not incur the same operating costs as many commercial internet service providers.

WiscNet does not incur the same operating costs as many commercial internet service providers. For example, several commercial providers indicated that they pay fees to transmit data across other networks. These paid data transmission arrangements are reportedly more common among smaller providers. However, providers may mutually agree to transmit data across their respective networks free of charge because it is beneficial to both parties to do so. Most providers operate using both no-charge agreements and paid data transmission arrangements. WiscNet began entering into no-charge agreements in 1999, and it currently has such agreements with 79 other networks. As of April 2012, WiscNet estimates that more than 99 percent of its total internet traffic was transmitted at no charge to WiscNet under such agreements. These arrangements facilitate WiscNet's ability to charge its members a flat fee for as much bandwidth as they are

capable of using. However, even when two networks agree to transmit data to each other free of charge, there are infrastructure costs for one or both to do so.

In addition, WiscNet does not incur costs for television, radio, or print advertisements. WiscNet's internal time tracking system indicates that its staff spent a total of 117 hours on marketing activities in FY 2010-11. WiscNet staff also reported spending 47 hours on activities related to its website, which provides information on its services and pricing. The comparable amount spent by commercial providers on advertising and related activities is not publicly available.

As a nonprofit organization, WiscNet does not need to generate a profit and is exempt from paying income taxes.

As a nonprofit organization, WiscNet is exempt from paying income taxes and needs to generate less revenue than a commercial provider because it only needs to cover its expenses for goods and services and not generate a profit. We could not determine the extent to which WiscNet's nonprofit status accounted for price differences between WiscNet and commercial providers, because the amount that commercial providers charge in excess of their expenses for goods and services is not publicly available. In addition, we note that WiscNet has generated approximately \$5.8 million in excess of its expenses over the past five years. If WiscNet had set its fees at only the amount necessary to cover its costs, its fees would have been lower than those it actually charged over this period.

UW-Madison did not include all employee fringe benefit costs when determining what to charge WiscNet for services.

WiscNet has not been charged for all of the services and benefits it receives from UW System institutions. We reviewed payments from WiscNet to UW-Madison and verified that WiscNet reimbursed UW-Madison for the institution's reported costs of providing several services. However, in some cases, UW-Madison did not include all employee fringe benefit costs when determining the amount to charge WiscNet, which UW-Madison officials attribute to an oversight. As a result, UW-Madison charged WiscNet for less than the actual cost of these services. Because UW-Madison did not include all fringe benefit costs in the charges for these services, WiscNet paid an estimated \$99,700 less for these services in FY 2010-11 than UW-Madison incurred to provide them.

We also found that WiscNet consulted with UW System Administration and UW-Madison legal counsel without being charged for those services. Because no documentation was available on the amount of time attorneys from UW System and UW-Madison spent on WiscNet's consultations, we could not estimate the cost of the services. However, staff of WiscNet, UW-Madison, and UW System Administration each stated that the consultations generally occurred only once or twice per year. Since 2011, WiscNet has retained private legal counsel.

In addition, WiscNet has been insured under UW-Madison's liability coverage but has not been charged by UW-Madison for a share of the insurance costs. It would be difficult to determine what, if any, additional cost UW-Madison incurred. Nevertheless, this arrangement reduces WiscNet's costs in comparison to commercial providers that must purchase liability insurance to do business. WiscNet indicates that it is working to obtain its own liability insurance, but price quotes from insurance companies had not yet been received.

Commercial providers would likely assert that UW-Madison's practice of charging WiscNet based on its costs to provide services could give WiscNet a competitive advantage because commercial providers may not be able to purchase similar services at a comparable price. Information is not publicly available on the amounts charged to commercial providers for similar services. However, it is not common practice for a government entity to charge more for services than they cost, and UW-Madison officials believe it is appropriate to charge WiscNet based on the costs they incur to provide the services.

Recommendation

We recommend UW-Madison seek reimbursement from WiscNet for unbilled fringe benefit costs related to services it provided to WiscNet.

In addition, management practices and inadequate documentation prevented us from determining whether WiscNet has adequately reimbursed UW System institutions for certain other goods and services. As noted, UW-Madison charged WiscNet for administrative support services, including accounting and billing services, based on estimates of the costs of staff time spent on WiscNet activities. However, UW-Madison officials did not have records to document that the estimates reflected the actual staff time spent on those duties. As a result, it is not possible to confirm whether WiscNet's payments for those services accurately reflected the cost of providing them. To the extent the estimates are inaccurate, WiscNet may have been either under- or over-charged for the actual cost of administrative support services.

Inadequate documentation prevented us from determining whether all payments made between WiscNet and UW System institutions were sufficient and appropriate.

Inadequate documentation associated with some financial transactions also prevented us from determining whether all payments made between UW System institutions and WiscNet were sufficient and appropriate. For example, UW System Administration indicated that it paid WiscNet \$750,000 for a portion of WiscNet's internet service fees charged to UW System institutions in FY 2010-11. WiscNet credited \$750,000 to its charges to UW System institutions, but accounting records document only a \$400,000 payment from

UW System Administration to WiscNet. According to WiscNet and UW System Administration officials, the difference occurred because WiscNet owed UW System \$350,000 for use of a portion of its network infrastructure. Rather than appropriately recording a \$750,000 payment from UW System Administration to WiscNet and a \$350,000 payment from WiscNet to UW System Administration, WiscNet and UW System Administration recorded a single payment of \$400,000 from UW System Administration to WiscNet.

The manner in which the transaction was conducted reduces transparency. Because two separate transactions were recorded as a single transaction with no written justification, it is difficult to assess the appropriateness of the \$400,000 payment. Although WiscNet and UW System Administration officials agreed that the \$350,000 amount was for WiscNet's use of a portion of UW System's network infrastructure, officials from each organization had different understandings of exactly which portions of UW System's infrastructure were included in that amount. This lack of clarity prevented us from conclusively determining whether WiscNet had paid UW System for the entirety of the infrastructure used. In addition, because WiscNet and UW System Administration did not account for the two transactions separately, they understated both revenues and expenses in their financial records.

We question the adequacy of reimbursements between UW-Madison and WiscNet based on a lack of sufficient written agreements.

Similarly, the lack of sufficient written agreements for the provision of goods and services under fixed-price arrangements and imprecise estimates of actual costs of those goods and services lead us to question the adequacy of reimbursements. For example:

- a 1990 agreement did not specify the scope of administrative services that UW-Madison would provide to WiscNet;
- a 1999 agreement did not specify the amount UW-Madison would charge WiscNet for network engineering services; and
- the costs UW-Madison incurred in providing additional network engineering services to WiscNet under a 2007 agreement, which continues to guide the provision of these services, consistently exceeded the amount specified under the agreement.

UW-Madison officials stated that they have not attempted to renegotiate the price of network engineering services under the 2007 agreement because they believe that the amount WiscNet paid for the use of UW System's network infrastructure was sufficient to

offset UW-Madison's unreimbursed costs. However, we believe that amending the agreements between UW-Madison and WiscNet would have been advisable given the extent to which costs differed from those that had been anticipated.

☑ Recommendation

We recommend UW-Madison improve the procedures it uses when entering into fixed-price agreements, including:

- *ensuring that the scope of all services is fully described in the agreements;*
- *specifying the amounts to be paid for each service to be provided by the parties; and*
- *regularly assessing the services being provided and promptly revising fixed-price agreements in instances in which experience shows that either the amount of services being provided or the cost of those services differs materially from what had been anticipated.*

■ ■ ■ ■

BadgerNet, UW System's Network, and Grant-Funded Networks ■

As noted, the main service WiscNet provides to its members is internet service. However, in order to access this internet service, WiscNet members must obtain their own connections to WiscNet's network. Most UW System institutions and other WiscNet members obtain these connections through BadgerNet, a state-supported network operated by a consortium of private telecommunications companies. However, UW System has developed its own network to provide internet connections for some of its institutions and has obtained federal grant funding to establish additional networks that will provide connections for other UW System institutions, WiscNet members, and others in certain areas of the state.

BadgerNet

BadgerNet is a statewide network that provides the services needed to connect state and local entities to the internet through an internet service provider.

Under s. 16.972(2), Wis. Stats., DOA may provide telecommunications services to state agencies; local units of government, such as school districts, public library systems, counties, and municipalities; qualified private schools; tribal schools; postsecondary institutions; museums; and zoos. DOA has used its authority to enter into a contract with a consortium of private companies to provide internet connections and other telecommunications services to government agencies and educational entities through a network known as BadgerNet.

Both WiscNet and BadgerNet are networks composed of infrastructure, such as optical fiber, which are used to transport data

from one location to another. However, they play different roles in allowing customers to use the internet. BadgerNet complements WiscNet by supplying the infrastructure needed to connect users to WiscNet's network or the network of a commercial internet service provider.

BadgerNet's network connects related customers to each other, such as all Department of Natural Resources offices throughout the state or the primary and secondary schools within a school district. Using only BadgerNet, these customers are able to transfer data, including e-mail, from one office or school to another. However, in order to either access information from or share data with non-BadgerNet customers, BadgerNet customers must obtain internet service through WiscNet or a commercial internet service provider. To obtain internet service, BadgerNet connects its customers to one of four locations in Eau Claire, Green Bay, Madison, or Milwaukee. It is the connection BadgerNet establishes with WiscNet and other internet service providers at those locations that allows BadgerNet customers to access the internet and send and receive data outside of the confines of BadgerNet's network.

In March 2005, DOA entered into a contract with AT&T to serve as the prime contractor for the BadgerNet network.

In March 2005, DOA entered into a contract with AT&T to serve as the prime contractor for operation of the BadgerNet network. The initial five-year contract term began in November 2006, following the installation of network infrastructure. In November 2011, DOA and AT&T mutually agreed to execute a renewal provision in the existing contract to extend the contract through November 1, 2016.

In order to provide services to BadgerNet customers outside of its service area, AT&T subcontracts with numerous private telecommunications providers, including Access Wisconsin, which is a consortium of independent local telephone companies. As of June 2012, a total of 42 telecommunications providers had connected 1,992 locations to the BadgerNet network. A list of those companies is shown in Appendix 3. In addition to providing connections to the internet, BadgerNet also provides video services and offers private networking services.

The price of a BadgerNet connection is based on the amount of bandwidth capacity a customer purchases. The capacity purchased from BadgerNet places a maximum threshold on the amount of internet bandwidth that customers can receive through WiscNet or a commercial internet service provider. Prices are established by the BadgerNet contract and range from \$502 per month for 1.5 Mbps of capacity to \$11,652 per month for 1 gigabit per second (Gbps) of capacity, which is equal to 1,000 Mbps. In order to ensure equal access to BadgerNet services throughout the state, the BadgerNet contract requires prices for comparable service to be identical

regardless of the geographic location of the customer. However, BadgerNet customers are required to pay any costs in excess of \$35,000 that providers incur in installing a BadgerNet connection to their location.

Under provisions of the initial contract, which was in effect from March 2005 through October 2011, DOA agreed to pay AT&T a minimum of \$116.7 million for BadgerNet services and network operations. Actual payments during that period totaled \$150.8 million. Similarly, DOA agreed to pay AT&T a minimum of \$133.8 million during the current contract term, which is in effect from November 2011 through October 2016. Through June 2012, DOA had paid AT&T \$16.6 million.

Many commercial internet service providers are available to BadgerNet customers through contracts with DOA.

Many commercial internet service providers are available to BadgerNet customers through contracts with DOA, including the commercial providers Solarus and Infinity Technology, Inc., as well as AT&T and its subcontractors. In addition, BadgerNet customers may instead use WiscNet, even though DOA and WiscNet do not have a contractual relationship regarding BadgerNet. DOA staff indicate that WiscNet was included as an available provider when the BadgerNet contract was executed in 2005, in part, because WiscNet was affiliated with UW System. In addition, WiscNet was the existing internet service provider for many BadgerNet customers when the contract was executed.

BadgerNet Customers

A majority of Wisconsin's school districts and library systems use BadgerNet to connect to the internet.

As shown in Table 10, there were 391 BadgerNet customers in June 2012 who purchased a connection to the internet, including 302 of Wisconsin's 424 school districts (71.2 percent) and 12 of Wisconsin's 17 public library systems (70.6 percent). In June 2012, 329 of the 391 customers (84.1 percent) used WiscNet as their internet service provider, while the remainder used commercial internet service providers.

Most BadgerNet customers, excluding state agencies, receive a TEACH subsidy to purchase BadgerNet connections.

Those wishing to purchase a BadgerNet connection must apply for service and be approved by DOA. More than 90 percent of BadgerNet customers who purchase a connection to the internet, including all public school districts, public libraries, and CESAs, receive subsidies for BadgerNet service through the Technology for Educational Achievement (TEACH) program, which is administered by DOA. TEACH was created by 1997 Wisconsin Act 27 and currently provides subsidies to public school districts and other educational agencies to purchase connections to the internet through BadgerNet.

Table 10

BadgerNet Customers Purchasing Internet Connections
June 2012

Customer Type	BadgerNet Customers	Customers Using WiscNet	Customers Using Commercial Providers	Percentage Using WiscNet
Public School Districts	302	254	48	84.1%
Other Primary and Secondary Schools ¹	24	15	9	62.5
UW System Institutions	17	17	–	100.0
Public Libraries ²	14	13	1	92.9
Private Colleges and Universities	11	11	–	100.0
CESAs	10	10	–	100.0
Technical Colleges	5	5	–	100.0
Counties	4	3	1	75.0
Other	4	1	3	25.0
Total	391	329	62	84.1

¹ Includes 20 private primary and secondary schools, two county-administered special education programs, the Wisconsin School for the Deaf, and the Wisconsin Center for the Blind and Visually Impaired.

² Includes 12 of Wisconsin's 17 public library systems and the public libraries in the cities of Fond du Lac and Marshfield.

TEACH subsidies vary based on the amount of bandwidth capacity purchased by the customer and range from \$360 to \$2,230 per month. The subsidies provided allow customers to pay a total of \$100 per month for a BadgerNet connection with a capacity of up to 5 Mbps, and \$250 per month for a connection with a capacity between 5 Mbps and 100 Mbps. DOA requires that customers submit data that demonstrates their need for a bandwidth capacity between 5 and 100 Mbps before it will authorize the additional bandwidth. As shown in Table 11, funding for TEACH subsidies fluctuated from FY 2006-07 through FY 2010-11 and averaged approximately \$24.5 million annually. Approximately 66 percent was funded with segregated revenue through the State's Universal Service Fund. The remaining 34 percent was funded with federal E-rate revenue.

Table 11

Funding for TEACH Subsidies
(in millions)

Fiscal Year	Amount
2006-07	\$23.9
2007-08	21.4
2008-09	23.4
2009-10	25.0
2010-11	29.0
Average	24.5

UW System's Network

Historically, most UW System institutions used BadgerNet to connect to the internet.

Historically, most UW System institutions used BadgerNet to connect to the internet. UW System Administration paid an average of \$1.1 million annually for BadgerNet connections from FY 2007-08 through FY 2011-12, primarily by using segregated revenue from the state's Universal Service Fund appropriated to UW System for subsidizing BadgerNet connections for its institutions.

However, during the development of the BadgerNet contract in 2005, UW System Administration and DOA agreed that UW-Madison, UW-Milwaukee, UW-Eau Claire, and UW-Green Bay would use a UW System network rather than BadgerNet, in part, because some of those institutions required substantially higher bandwidth capacities than other BadgerNet customers. For example, in June 2008, the earliest date for which we obtained UW System and BadgerNet capacity information, the total bandwidth capacity purchased by UW-Madison and UW-Milwaukee was 30 Gbps, while the total capacity purchased by all BadgerNet customers was approximately 15 Gbps.

Starting in 2003, UW System entered into lease agreements with public and private entities to develop its own network.

To provide internet connections to the four campuses, UW System entered into three lease agreements with public and private network providers to create its own network:

- First, UW System Administration entered into a 20-year agreement with the Wisconsin Department of Transportation (DOT) in 2003 for use of a portion of its infrastructure passing through Eau Claire, Madison, and Milwaukee and extending to the border with Illinois. Under this agreement, UW System Administration made annual payments of \$218,000 to DOT.

- Second, UW System Administration and UW-Madison entered into agreements in 2004 with multiple providers, including the Illinois State Toll Highway Authority and the Chicago Transit Authority, for the use of infrastructure needed to connect UW System's infrastructure in Wisconsin to connections in Chicago. We estimate lease payments under these agreements total approximately \$53,000 per year.
- Third, UW System Administration entered into a 20-year agreement with Qwest Communications, Inc., (now CenturyLink) in 2006 for the use of a portion of its infrastructure from Eau Claire to Green Bay to Milwaukee. UW System Administration paid the company an initial fee of \$386,472 and makes annual maintenance payments of \$32,306.

UW System is expanding its own network to serve additional UW System institutions.

In addition to lease agreements for fiber infrastructure, UW System Administration also paid for maintenance, temporary connections, and federal grant contributions needed to develop and manage its network. As shown in Table 12, UW System obtained 32.1 Gbps of capacity through its network each year from FY 2007-08 through FY 2009-10, at an average cost of approximately \$0.8 million per year. Subsequently, UW System expanded its network to provide internet connections to additional UW System institutions. In FY 2011-12, UW System paid \$1.6 million for 47.1 Gbps of capacity through its various lease agreements, while it paid AT&T \$1.1 million that year to obtain 3.1 Gbps of capacity for its institutions that were still served by BadgerNet.

UW System indicates that it is expanding its network in order to obtain connections for its institutions at reduced cost. For example, rather than upgrading the capacity of UW-Parkside's BadgerNet connection from 255 Mbps to 1 Gbps, UW System chose to disconnect UW-Parkside's BadgerNet connection in August 2011 and enter into a 20-year lease agreement with a commercial vendor for use of network infrastructure to serve the campus. The lease agreement calls for a one-time payment of \$285,000 plus an annual maintenance fee, which totaled \$20,876 in FY 2010-11. We estimate the total cost for UW-Parkside's internet connection over the life of the lease to be approximately \$3,000 per month. In contrast, UW-Parkside would have been charged \$11,652 per month for comparable bandwidth capacity under current BadgerNet rates.

Table 12

Network Connection Capacity and Expenditures for UW System Institutions

Fiscal Year	BadgerNet			UW System Network		
	UW System Institutions Served ¹	Bandwidth Capacity (Gbps)	Expenditures (in millions) ²	UW System Institutions Served ¹	Bandwidth Capacity (Gbps)	Expenditures (in millions) ³
2007-08	22	1.4	\$1.0	5	32.1	\$0.8
2008-09	22	2.2	1.1	5	32.1	0.9
2009-10	22	2.7	1.2	5	32.1	0.9
2010-11	20	2.7	1.2	7	44.1	1.7
2011-12	17	3.1	1.1	10	47.1	1.6

¹ One institution, UW-Fox Valley, was served by both a BadgerNet connection and a UW System network connection from FY 2007-08 through FY 2011-12.

² From FY 2007-08 through FY 2011-12, 93 percent of UW System's BadgerNet connections were funded with segregated revenue from the State's Universal Service Fund and the remainder was funded with GPR.

³ From FY 2007-08 through FY 2011-12, 95 percent of UW System's network connections were funded with GPR and the remainder was funded with federal grant funds.

Expansion of UW System's network increased its bandwidth capacity and reduced its annual expenses by an estimated \$370,000.

As of June 2012, UW System institutions had entered into four additional agreements that will allow five additional institutions to connect to UW System's network. These agreements, including the agreement for UW-Parkside, reduced UW System's annual expenses by an estimated \$370,000 while increasing the bandwidth capacity at the six institutions by a total of 3.4 Gbps.

As of June 2012, 93.8 percent of UW System's total bandwidth capacity was provided through UW System's network, while 17 UW System institutions continued to use BadgerNet connections that provided the remaining 6.2 percent. Appendix 4 provides information on the current internet connection capacity at each UW System institution. UW System indicates that it plans to obtain additional network infrastructure in order to connect other UW System institutions to its own network by 2017.

As UW System institutions disconnect services, UW System payments for BadgerNet services will decrease. In FY 2011-12, UW System paid \$1.1 million for BadgerNet services, which accounted for approximately 3.9 percent of all payments for BadgerNet services in that year. However, DOA expects that decreases in payments from UW System institutions will not affect DOA's ability to meet its minimum payment requirements to AT&T under the BadgerNet contract.

Grant-Funded Networks

In 2010, UW System institutions were awarded \$35.0 million in ARRA funds for installation of network infrastructure.

In 2010, UW-Madison and UW-Extension each successfully applied for federal American Recovery and Reinvestment Act (ARRA) grants to support the installation of network infrastructure. UW-Madison was awarded \$5.1 million to fund the Metropolitan Unified Fiber Network (MUFN) project, and UW-Extension was awarded \$29.9 million to fund the Building Community Capacity through Broadband (BCCB) project. Both projects are currently installing infrastructure that will expand UW System’s network to provide internet connections to additional UW System institutions, and they will also provide connections to the internet for other entities in those communities, such as school districts, local governments, and health care organizations.

Metropolitan Unified Fiber Network (MUFN)

The MUFN project is installing network infrastructure in the Madison area.

The MUFN project is installing network infrastructure in Madison and nearby municipalities, including Fitchburg, Middleton, and Monona. Part of the infrastructure will be used to establish a community area network that will provide high-capacity connections to the internet for 18 entities, including 3 entities that currently obtain their connections through BadgerNet. Table 13 shows the types and number of entities that will be served. Appendix 5 provides a complete list of participating entities that will collectively operate the network infrastructure through a nonprofit association. The City of Madison will own the project’s infrastructure.

Table 13

Types of Entities to be Served by the MUFN Project

	Total
Public School Districts	3
Municipalities	2
UW System Institutions	2
Public Libraries	1
Technical Colleges	1
Counties	1
Other ¹	8
Total	18

¹ Includes University Research Park, UW Health, the State Laboratory of Hygiene, and nonprofit organizations.

The MUFN infrastructure will also be used to provide private business with connections to the internet.

The MUFN infrastructure will also be used to provide private businesses with connections to the internet. Two private network providers, Mad City Broadband, LLC and Wisconsin Independent Network, LLC have entered into contracts with the City of Madison to operate a portion of the network, which they will use to enter into agreements with private businesses wishing to connect to it.

The budget for the MUFN project is \$8.9 million.

The budget for the MUFN project is \$8.9 million, including \$5.1 million (57.6 percent) in federal funds and \$3.8 million (42.4 percent) in cash and in-kind contributions from 13 of the entities that will be served by the community area network created by the project. Appendix 6 shows the contributions pledged by each entity. As shown in Table 14, \$3.2 million of the MUFN project's \$8.9 million budget had yet to be applied to the project through June 30, 2012. Project managers indicate that network construction will be completed by January 31, 2013, which is the deadline for spending the remaining federal grant funds.

Table 14

MUFN Project Status
Through June 30, 2012

	Federal Funds for Construction and Equipment	Federal Funds for Engineering and Management	Cash and In-Kind Contributions	Total
Total Budget Amount	\$4,569,109	\$537,264	\$3,753,242	\$8,859,615
FY 2010-11 Expenditures/Use	(217,688)	(44,405)	(183,022)	(445,115)
FY 2011-12 Expenditures/Use	(1,790,635)	(112,129)	(3,339,239)	(5,242,003)
Amount Remaining	\$2,560,786	\$380,730	\$ 230,981	\$3,172,497

Building Community Capacity through Broadband (BCCB)

The BCCB project is installing network infrastructure in Platteville, Superior, Wausau, and the Chippewa Valley.

The BCCB project is installing infrastructure that will provide internet connections to 75 public and private entities, primarily through four community area networks in Platteville, Superior, Wausau, and the Chippewa Valley. The infrastructure in each community area network will be collectively owned and operated by the participating entities through nonprofit associations. Table 15 shows the types and number of entities to be served. Appendix 7 provides a complete list of the participating entities, which include six UW System institutions and five other entities that currently purchase connections to the internet through BadgerNet.

Table 15

Types of Entities to be Served by the BCCB Project

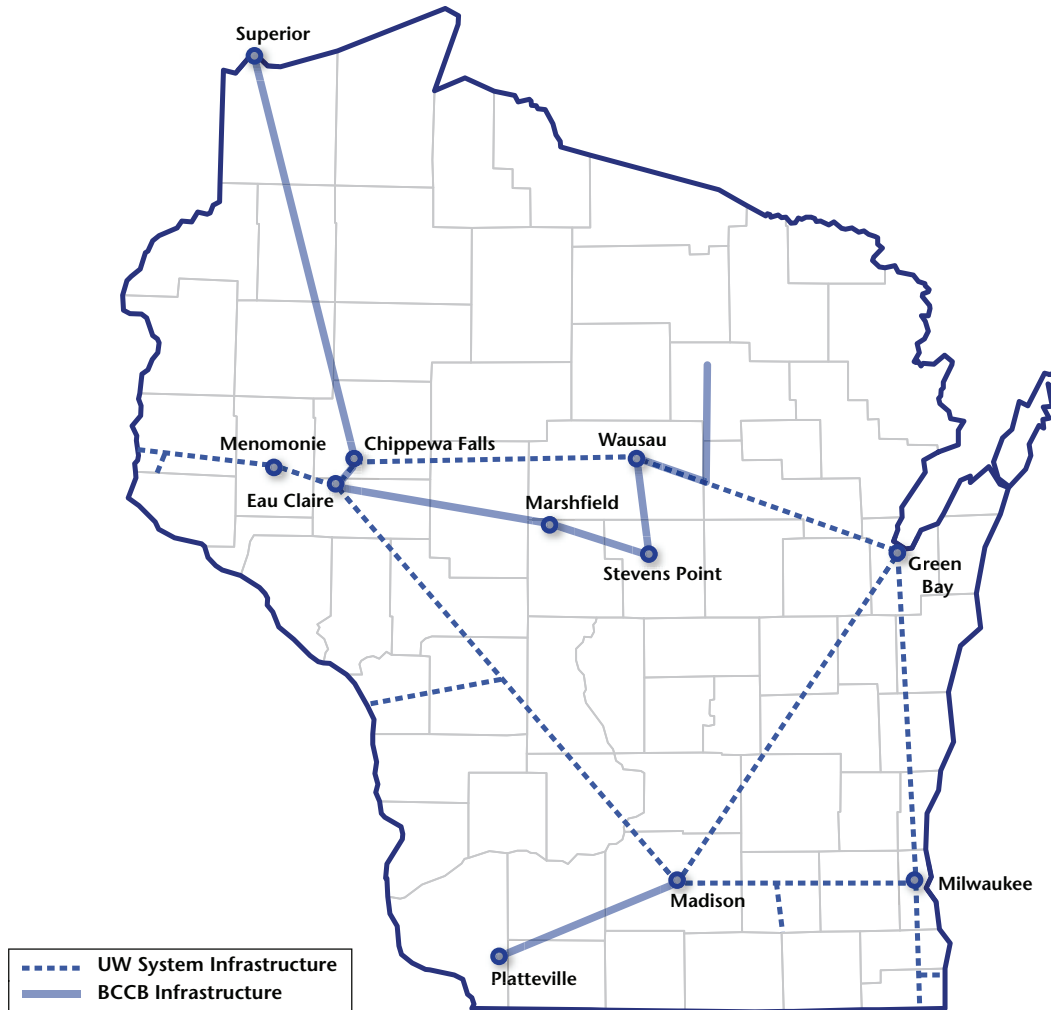
	Total
Health Care Organizations	17
Public School Districts	11
Municipalities	10
UW System Institutions	10
Counties	5
Technical Colleges	3
Other Primary and Secondary Schools	2
Public Libraries	2
Other ¹	15
Total	75

¹ Includes state agencies and nonprofit organizations.

The BCCB project will also install infrastructure to connect each community area network to locations in Eau Claire and Madison, which will allow participants in each network to obtain internet service from several internet service providers, including WiscNet, and allow participating UW System institutions to connect to existing UW System network infrastructure. Figure 2 shows the location of the BCCB network infrastructure and the existing UW System infrastructure. A private vendor, CCI Systems, Inc., was selected by UW-Extension to construct the BCCB infrastructure through a standard public bidding process. Under the terms of the federal grant, CCI Systems, Inc., will also own part of the infrastructure and use it to sell internet connections to nearby businesses and residents, independent of the community area networks. For example, it has developed plans, under the business name Packerland Broadband, a division of CCI Systems, Inc., to sell internet connections to customers in eight rural municipalities located near the BCCB infrastructure between Eau Claire and Stevens Point, including Auburndale, Fall Creek, and Pittsville.

Figure 2

BCCB and UW System Network Infrastructure



The budget for the BCCB project is \$42.7 million.

The budget for the BCCB project is \$42.7 million, including \$29.9 million (69.9 percent) in federal funds and \$12.8 million in cash and in-kind contributions from Packerland Broadband and 39 other entities that will benefit from the community area networks. Appendix 8 shows the contributions provided by each entity. As shown in Table 16, \$19.1 million of the BCCB project's \$42.7 million budget had yet to be applied to the project through June 30, 2012. Project managers indicate that network construction will be completed by July 31, 2013, which is the deadline for spending the remaining federal grant funds.

Table 16

BCCB Project Status
Through June 30, 2012

	Federal Funds for Construction and Equipment	Federal Funds for Engineering and Management	Cash and In-Kind Contributions	Total
Total Budget Amount	\$27,401,493	\$2,483,421	\$12,841,830	\$42,726,744
FY 2010-11 Expenditures/Use	(693,949)	(317,651)	(486,737)	(1,498,337)
FY 2011-12 Expenditures/Use	(14,482,414)	(1,039,669)	(6,628,930)	(22,151,013)
Amount Remaining	\$12,225,130	\$1,126,101	\$ 5,726,163	\$19,077,394

■ ■ ■ ■

UW System's Role in Grant-Funded Networks ■

It is anticipated that the federal grant-funded network projects will charge less for internet connections than BadgerNet or commercial providers. Concerns have been raised that UW System institutions' involvement in the networks, which some may assert violate statutory provisions prohibiting UW System institutions from providing telecommunications services, also results in lower prices. We analyzed available information on internet connection charges from a variety of providers to help identify and explain the price differences among them, and we analyzed UW System institutions' involvement in the grant-funded networks.

Selecting an Internet Connection Provider

Of the 310 respondents to our survey of school districts, counties, private colleges and universities, library systems, technical colleges, and CESAs, 193 (62.3 percent) reported obtaining a connection to the internet through BadgerNet. Most of the remaining institutions obtained their connections from a commercial provider. However, eight respondents reported that they used existing community area networks, and four reported that they own or lease the infrastructure they use for their connections. In addition, nine respondents reported that they plan to change their provider to one of the community area networks established under the MUFN or BCCB projects once construction is complete, including four respondents that currently use BadgerNet.

Price and available bandwidth capacity influenced participants' decisions to use the MUFN and BCCB networks.

More than three-fourths of all respondents indicated that the price of services influenced their choice of provider for an internet connection, while 58.1 percent of respondents indicated that available bandwidth capacity influenced their choice. Moreover, the nine respondents that indicated they plan to use the MUFN or BCCB networks in the future reported that both increased capacity and reduced service prices influenced their decision to change providers. Additional information on the survey's results is provided in Appendix 2.

The MUFN and BCCB grant applications contained projected prices for the internet connections to be provided through the community area networks to be constructed by the projects and compared them to documented commercial prices at the time of application. The MUFN application projected pricing of \$200 or \$400 per month for a 1 Gbps connection to the MUFN community area network, with the price depending on the location within the MUFN service area. By contrast, the application indicated that commercial prices in the Madison area for the same bandwidth capacity were more than \$1,000 per month, as shown in Table 17. In addition, the application indicated that a 1 Gbps connection from BadgerNet would cost more than \$3,300 per month, even for schools and libraries eligible for the TEACH program, because TEACH only subsidizes the price of a connection up to 100 Mbps.

Table 17

Price Comparisons between the MUFN Network and Alternative Internet Connection Providers in the Madison Area¹
(for 1 Gbps connections)

	Monthly Price ²
Proposed MUFN Price	\$200 or 400 ³
AT&T (entry-level quality of service)	\$1,028
AT&T (mid-level quality of service)	1,148
TDS Metrocom	1,400
AT&T (high-level quality of service)	2,200
BadgerNet (with TEACH subsidy) ⁴	3,304
BadgerNet (without TEACH subsidy) ⁵	5,760

¹ Based on information reported in the federal grant application for the MUFN project.

² Prices do not include discounts public schools or libraries may receive through federal E-rate subsidies.

³ MUFN network prices are determined by geographic location within the network's service area.

⁴ The TEACH program provides subsidies to allow schools, libraries, and other eligible customers to pay \$250 per month for 100 Mbps of BadgerNet bandwidth capacity. However, customers are required to pay the full BadgerNet price for bandwidth capacity above 100 Mbps.

⁵ BadgerNet has a 1 Gbps price specific to the Madison area. The price for the same capacity is \$11,652 in other areas of the state.

Projected prices for internet connections from the MUFN and BCCB networks are significantly lower than the prices charged by BadgerNet.

The BCCB application indicated projected prices of \$125 per month for 1 Gbps connections through its community area networks in the Chippewa Valley and Wausau. By contrast, the application indicated that commercial providers would charge \$4,000 per month for the same bandwidth capacity, while BadgerNet would charge at least \$9,196 per month, as shown in Table 18.

Table 18
Price Comparisons between the BCCB Networks and Alternative Internet Connection Providers in the Chippewa Valley and Wausau¹
 (for 1 Gbps connections)

	Monthly Price ²
Proposed BCCB Price	\$ 125
CenturyTel	4,000
Charter	4,000
BadgerNet (with TEACH subsidy) ³	9,196
BadgerNet (without TEACH subsidy)	11,652

¹ Based on information reported in the federal grant application for the BCCB project.

² Prices do not include discounts public schools or libraries may receive through federal E-rate subsidies.

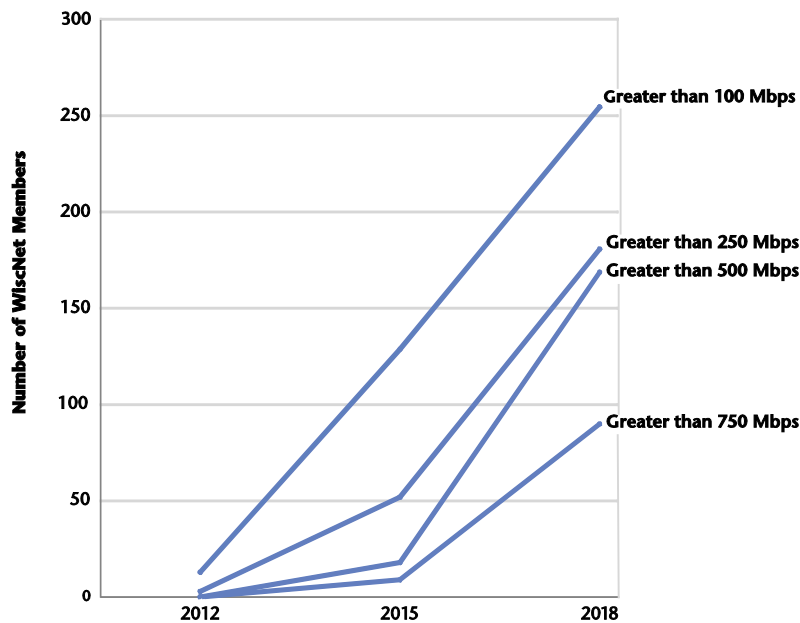
³ The TEACH program provides subsidies to allow schools, libraries, and other eligible customers to pay \$250 per month for 100 Mbps of BadgerNet bandwidth capacity. However, customers are required to pay the full BadgerNet price for bandwidth capacity above 100 Mbps.

Questions have been raised regarding whether participating entities such as school districts, public library systems, and local governments are in need of the amount of bandwidth provided by 1 Gbps connections. Representatives of those institutions acknowledge that their current peak bandwidth usage is well below that level. However, some argue that they will likely need such capacity in the future. To assess potential future needs, we calculated the growth rate of bandwidth usage for 329 members who received internet service from WiscNet in both 2009 and 2012, including public school districts, other primary and secondary schools, public library systems, technical colleges, private colleges and universities, and county and municipal governments. We then used the most recent three-year growth rate for each individual member to project their usage in 2015 and in 2018. As shown in Figure 3, if bandwidth usage continues to grow at the same rate, 9 of the 329 members would achieve peak usage of more than 750 Mbps by 2015, while 90 members, including 75 school districts,

would reach that threshold by 2018. In addition, although only 3 of the 329 WiscNet members attained peak usage above 250 Mbps in 2012, current rates of growth would increase the number of members at that level to 52 in 2015 and 181 in 2018.

Figure 3

Projected Bandwidth Usage¹



¹ Based on 329 WiscNet members who received internet services from WiscNet in both 2009 and 2012.

Commercial providers have expressed concern that the MUFN and BCCB networks unnecessarily duplicate existing commercial infrastructure.

Commercial providers have also expressed concern that the MUFN and BCCB network infrastructure unnecessarily duplicates the infrastructure commercial providers have already installed and is available for use by the entities to be served by the grant-funded networks. While commercial providers shared maps with us that show their networks can provide MUFN and BCCB participants with internet connections in the areas to be served, supporters of the grant-funded networks argue that the lower-cost connections to be provided through the grant-funded networks justify their construction. We also note that one commercial provider has negotiated with UW System to obtain a portion of the BCCB infrastructure for its own use, while another unsuccessfully applied for a federal stimulus grant to make improvements to its infrastructure in areas that will be served by BCCB's infrastructure.

Concerns about UW System's Involvement in Grant-Funded Networks

The use of grant funds will allow the MUFN and BCCB networks to offer low-cost internet connections.

A primary reason the MUFN and BCCB networks will be able to offer low-cost connections to the internet is because equipment and construction costs will be covered by federal grant funds and participant contributions. As a result, monthly charges on each network will be set to recover only the expenses associated with network operations, such as administration, maintenance, and equipment replacement and not the costs of installing the infrastructure. Supporters also note that the networks will not be run to generate a profit, and that participants' collective oversight and operation of each network will help to limit costs.

Concerns have been raised about UW System institutions' involvement in the networks.

As noted, some have questioned whether UW System institutions' involvement in the MUFN and BCCB networks may provide financial benefits that contribute to the anticipated low-cost connections. To assess these concerns and concerns that UW System's involvement in the networks could violate state law, which since 2005 has prohibited UW System institutions from offering, reselling, or providing telecommunications services that are available from commercial providers to any other public or private entity, we considered five activities of UW System institutions related to funding the networks or providing telecommunications services.

First, UW System institutions are contributing \$139,750 to the MUFN project and approximately \$2.2 million to the BCCB project. Participant contributions were required in order for the federal grant applications to be approved, and other participants also made contributions to each project. For example, at \$3.3 million, the City of Madison is providing the largest participant contribution to the MUFN project, largely through an in-kind contribution of its existing network infrastructure. The largest single contributor to the BCCB project is Packerland Broadband, which will provide \$2.4 million toward the project. In addition, DOT, WiscNet, two counties, one municipality, and two health care organizations are also making contributions ranging from \$410,500 to \$1.6 million.

UW-Madison and UW-Extension staff are managing and overseeing network construction for each project.

Second, UW-Madison and UW-Extension, as the grant applicants, have the primary responsibility for managing and overseeing network construction for each project, including tracking and reporting financial transactions, overseeing construction contractors, and providing engineering support. We determined that 12 UW-Madison staff, who oversee and manage the MUFN project, provided labor to the project during FY 2011-12, while 2 UW-Extension staff and 4 staff of other UW System institutions provided labor to the BCCB project in that year. Most of the salary and fringe benefit costs for UW System employees on both projects

were reimbursed by project funds. One exception is that an estimated 80 to 100 hours devoted to the MUFN project by UW-Madison staff have not been reimbursed by project funds. UW System staff attributed this to an unexpected need to conduct work before grant funds became available. That work represented approximately 2 percent of total staff hours committed to the MUFN project through June 2012. Because no information was documented on the staff performing the unreimbursed labor, we could not estimate the cost of that time.

Nonprofit organizations will be responsible for providing services through the MUFN and BCCB networks.

Third, initial plans identify UW System institutions as members of the nonprofit associations that will be responsible for operating and administering each community area network. UW System institutions plan to participate on the governing boards of the associations, although their designated seats will not provide them with majority control. Draft agreements indicate that UW-Madison will have a permanent seat on the five-member governing board of the MUFN association. In addition, UW-Platteville will hold 2 of 6 seats, UW-Superior will hold 1 of 5 seats, and UW-Eau Claire will hold 1 of 11 seats on the governing boards of their respective community area networks. Initial plans also indicate that other participating UW System institutions will be eligible to serve as at-large members on those boards. The associations will collect fees from participants in the community area networks and will oversee the admission of new participants. Therefore, although UW System institutions anticipate an ongoing role in network governance, the associations will be responsible for providing network services to participants.

Fourth, initial plans indicate that at least two UW System institutions intend to provide administrative and operational support to community area networks. Representatives of BCCB's Platteville network indicate that UW-Platteville intends to provide technical support to other network members, including responding to network outages and troubleshooting operational problems. Representatives of the Chippewa Valley network indicate that UW-Eau Claire will play the same role for that network. Grant participants state that they consider such roles to be participant contributions that reflect the collaborative nature of the networks' governance and operations. However, providing support services to other network members may be viewed as violating the statutory prohibition on UW System institutions providing telecommunications services that are available from other providers. It is also unclear whether UW-Platteville or UW-Eau Claire will charge their network associations for their services. If they do not, or if the charges do not reflect the full costs of providing those services, the institutions could be seen as subsidizing the networks.

UW System will own a portion of the network infrastructure constructed by the BCCB project.

Finally, BCCB documents state that UW System will own a portion of the network infrastructure, which it plans to use to link UW-Platteville, UW-Stevens Point, UW-Superior, UW-Barron County, UW-Marathon County, and UW-Marshfield/Wood County to UW System's network. In addition, UW System Administration indicated that it may offer portions of the BCCB infrastructure to other public institutions because it believes the provision of the infrastructure is consistent with its educational and outreach missions. However, providing such access to any entity outside of UW System may be viewed as violating the statutory prohibition on providing telecommunications services. UW System Administration indicates that it is currently developing plans for the ownership and use of this infrastructure.

Grant-Funded Networks in Other States

The MUFN and BCCB projects received ARRA funding through the Broadband Technology Opportunities Program, which provided a total of \$4.2 billion to entities nationwide to support enhanced infrastructure for public institutions and commercial providers. While MUFN and BCCB were the only Wisconsin projects to use funding from that program to install network infrastructure, 14 commercial providers in Wisconsin received \$85.2 million through a separate ARRA-funded program for the construction of infrastructure to serve rural areas.

Seven public universities in other states received ARRA funding for network infrastructure projects.

We reviewed the \$4.2 billion awarded by the Broadband Technology Opportunities Program and found that awards were made to a variety of institutions, including public universities, commercial providers, state and local governments, and nonprofit associations. As shown in Table 19, we identified seven public universities in other states that received network infrastructure grants totaling \$269.2 million.

Table 19

Public Universities in Other States Receiving Funds through the Broadband Technology Opportunities Program

	Federal Grant Funding (in millions)
University of Arkansas	\$102.1
Northern Illinois University	46.1
University of New Hampshire	44.5
University of Hawaii	34.0
University of Illinois at Urbana-Champaign	22.5
University of Utah	13.4
Texas A & M University	6.6
Total	\$269.2

The grant-funded networks that will be constructed through the seven projects are designed to provide internet connections to institutions of higher education, public schools, libraries, local governments, and health care facilities. Five of the projects are designed to provide internet connections to a range of institutions, similar to the MUFN and BCCB projects. In contrast, one project will primarily provide connections for health care organizations, and another is primarily designed to serve institutions of higher education.

Universities in other states plan to be involved in the management and operation of federally funded networks.

In each of the seven projects, the universities that received federal grant funds also plan to play a role in the management and operation of the networks. For example, the University of New Hampshire will oversee and operate the grant-funded network with which it is involved, while the University of Utah will serve as a member of its network's governing committee, and university staff members will manage and provide technical support for the network.

Of the seven participating universities, only Texas A&M University currently plans to own part of the network infrastructure being constructed. However, while the other six universities will not own the infrastructure, they plan to have some control over the infrastructure for their projects. For example, the University of New Hampshire and the University of Illinois at Urbana-Champaign will receive long-term leases on portions of the infrastructure built by their respective grants. In addition, the research and education networks that serve the universities in Arkansas, Hawaii, and Utah will own or lease the infrastructure used for their networks. Networks in Hawaii and Utah will lease the infrastructure owned by commercial providers, while the network in Arkansas will own parts of the infrastructure and lease other parts from commercial providers.

UW System's Future Role ■

2011 Wisconsin Act 32 made statutory changes affecting the involvement of UW System in WiscNet and the grant-funded networks. Because UW System's future plans for obtaining internet services and its future role in the grant-funded networks have not been finalized, we could not assess its compliance with Act 32 at the present time. Therefore, continued monitoring will be necessary.

Statutory Changes

Since July 2005, statutes have limited UW System's use of telecommunications services, including internet services, to the purpose of carrying out its mission. UW System has also been statutorily prohibited since that time from offering, reselling, or providing to any other public or private entity telecommunications services that are available from a private telecommunications provider.

2011 Wisconsin Act 32 expanded the restrictions on the involvement of UW System institutions in telecommunications services.

2011 Wisconsin Act 32 expanded the restrictions on UW System's involvement in telecommunications services through the creation of s. 36.585, Wis. Stats., which:

- specifies that the definition of telecommunications services includes broadband access and data transport, information technology services, internet access services, and unlit fiber, which is optical fiber that is not currently being used to transmit data;

- prohibits UW System institutions from being a member, shareholder, or partner in any third-party entity that offers, resells, or provides telecommunications services beginning July 1, 2013, excluding entities composed entirely of universities and university-affiliated research facilities; and
- prohibits UW System institutions from committing any funds related to the BCCB project after June 15, 2011, without first receiving approval from the Joint Committee on Finance. We note that in July 2011, the Joint Committee on Finance approved the commitment of all BCCB funds not previously committed.

Future Provision of Internet Services

UW System institutions intend to discontinue their memberships in WiscNet by July 2013.

In order to comply with Act 32's prohibition on membership in third-party entities providing telecommunications services, UW System officials indicate that all of its institutions will discontinue their WiscNet memberships by July 1, 2013. The three WiscNet Board members representing UW System institutions—UW-Madison, UW-Milwaukee, and UW System Administration—resigned from the Board in September 2012.

In addition, UW-Madison indicates that it will end its fiscal agent relationship with WiscNet in order to address concerns about the administrative relationship between the two entities. To implement this change, WiscNet officials indicate they are in the process of:

- moving WiscNet's funds from UW-Madison accounts to private bank accounts;
- entering into contracts with private vendors for accounting and human resources services; and
- preparing to employ their own staff, beginning with the development of employee position descriptions and fringe benefits.

UW System could provide internet services directly and exclusively to its institutions.

To replace services heretofore provided by WiscNet, UW System has at least two options. First, UW System could provide internet services directly and exclusively to its own institutions. This option would achieve compliance with Act 32's prohibitions on offering, reselling, or providing telecommunications services to entities outside of the UW System. However, at the time of our fieldwork, UW System officials did not believe the direct and exclusive

provision of services to its institutions was a preferred option, in part because they believe it would likely result in increased costs for UW System institutions and may adversely affect their connections with other research and education networks.

In addition, this option would create challenges for WiscNet in serving its remaining members, which include approximately three-fourths of Wisconsin's public school districts. As noted, WiscNet currently uses UW System's network infrastructure to provide internet services to all of its members. Because UW System indicates that WiscNet's access would end if it chose to provide services directly and exclusively to its own institutions, WiscNet would need to procure infrastructure from an alternate vendor. The extent to which this would increase fees charged to remaining WiscNet members is not known. As of November 2012, WiscNet indicated it had not taken steps to procure such infrastructure.

A second option could involve UW System contracting with a vendor to provide internet services to its institutions. If it contracted with a vendor to provide internet services exclusively to UW System institutions, the effects on other WiscNet members would likely be the same as if it chose to provide services directly and exclusively to its institutions.

UW System officials may consider seeking a vendor who would be willing to provide internet services to both UW System institutions and WiscNet members.

However, UW System officials indicated they may consider issuing a request for proposals seeking a vendor to provide internet services to its institutions while also assessing the vendor's willingness to provide services to WiscNet members at comparable prices. If pursued by UW System, this type of approach may take the form of a cooperative purchasing agreement. A February 2006 report by the National Association of State Procurement Officials notes that cooperative purchasing agreements are often used in procuring information technology services. A common model for such an agreement involves an individual government agency entering into a contract that allows other governmental entities to obtain identical services from the vendor under the same contract terms. However, the report also notes that such arrangements may be viewed as unfair by other vendors.

If a request for proposals is issued by UW System, it is possible that proposals may be submitted by WiscNet and vendors serving other research and education networks throughout the country. Therefore, the manner in which a potential vendor would interact with UW System institutions to provide services may raise concerns about UW System's future compliance with Act 32. If a vendor provides services to all WiscNet members and UW System allows vendors to access UW System resources, such as infrastructure and network monitoring services, the resulting arrangement, including bandwidth and fees, could be comparable to the existing relationship between UW System and WiscNet.

UW System officials do not believe they are legally constrained from allowing a vendor selected through a procurement process to access some of the resources currently used by WiscNet. They believe this practice is consistent with statutory provisions authorizing UW System institutions to procure telecommunications services in order to carry out their missions. They also note that it is common to allow vendors to use UW System resources in providing services. For example, UW-Madison currently allows a private vendor to use the cable infrastructure installed in its residence halls to provide television services to students. However, some believe that WiscNet's current use of UW System's infrastructure and services conflicts with the statutory prohibition on UW System institutions providing telecommunications services. Therefore, it seems likely that similar concerns may arise with any plan that allows a vendor access to UW System's infrastructure and services, especially if the infrastructure will be used to provide services to entities other than UW System institutions.

UW System's approach to achieve compliance with Act 32 should be closely monitored.

Any approach taken by UW System to achieve compliance with Act 32 should be closely monitored for its effects on UW System institutions and the members of WiscNet.

Recommendation

We recommend UW System Administration report to the Joint Legislative Audit Committee by July 1, 2013, on its plans for obtaining internet services, including:

- *the identification of any vendors selected to provide services; the types of services to be provided; the amounts to be charged for services; and the extent to which the vendor will use UW System resources, including its infrastructure and network monitoring services; and*
- *the extent to which entities outside of the UW System, such as school districts and other local governments, will receive services through the same arrangement as UW System institutions and whether UW System resources will be used in the provision of services to these other entities.*

Future Role of UW System in Grant-Funded Networks

In November 2011, a lawsuit challenging UW-Extension's involvement in the BCCB project was dismissed in state court.

In June 2011, Access Wisconsin, a consortium of private telecommunications providers, filed a lawsuit in Dane County Circuit Court to halt the progress of the BCCB project. The lawsuit asserted that UW-Extension's role in securing the grant violates the statutory prohibition on UW System providing telecommunications services. The lawsuit was dismissed in November 2011. Although no written opinion was issued, UW System officials and some private telecommunications representatives indicate that the court's oral ruling concluded that UW System's involvement was implicitly authorized by the Legislature's reference to the BCCB project under s. 36.585(4), Wis. Stats., which established that funds for the project could be committed only with the approval of the Joint Committee on Finance.

Construction of both the BCCB and MUFN projects is expected to be completed in 2013, and the community area networks built by the projects are expected to begin serving participants by that time. However, the legality of UW System institutions' participation in the community area networks is subject to conflicting statutory interpretations.

There is a disagreement regarding whether UW System institutions can be participants in the grant-funded networks.

First, there is disagreement regarding whether UW System institutions can be network participants. UW System Administration believes that the court's ruling to dismiss Access Wisconsin's lawsuit is consistent with UW System institutions' continued involvement in BCCB-funded network projects. In addition, UW-Madison officials believe that UW-Madison's participation in the MUFN network is legally authorized by statutory provisions referencing UW System's ability to procure telecommunications services to carry out its mission, and because UW-Madison's status as a MUFN grant recipient makes it responsible for carrying out the duties specified in the grant application. Because the community area networks will be operated by nonprofit associations of which UW System institutions would be members, others may interpret participation in these networks as conflicting with s. 36.585(3), Wis. Stats., which prohibits any UW System institution from being a member, shareholder, or partner with a third-party entity that offers, resells, or provides telecommunications services beginning July 1, 2013.

It is unclear whether UW System institutions can offer additional support to the grant-funded networks.

Second, it is unclear whether UW System institutions can offer additional support to the networks. As noted, initial plans call for UW System institutions to provide technical support services to two community area networks built by the BCCB project, and UW-Eau Claire is making in-kind contributions of infrastructure that will be used as part of the Chippewa Valley BCCB network.

UW System Administration again points to the court's ruling in dismissing the BCCB lawsuit as evidence that UW System's involvement is consistent with current law. However, this could be viewed as conflicting with the statutory prohibition on offering, reselling, or providing telecommunications services.

Third, statutory interpretations could affect UW System's plans to own a portion of the network infrastructure built by the BCCB projects. Initial plans suggest UW System may provide some of the BCCB infrastructure to others for their use, which may be viewed as conflicting with UW System's statutory prohibition on offering, reselling, or providing telecommunications services. In addition, because UW System will not need the entire infrastructure it may own in order to serve its institutions, some infrastructure could be unused. UW System may consider transferring ownership of the potentially unused infrastructure to one or more entities involved in the BCCB project before construction is complete. If this results in the transfer of infrastructure to WiscNet, it would likely raise additional concerns.

As noted, UW System plans to connect six of its institutions—UW-Platteville, UW-Stevens Point, UW-Superior, UW-Barron County, UW-Marathon County, and UW-Marshfield/Wood County—to its own network using BCCB network infrastructure. If it is determined that statutes prohibit its continued involvement, UW System would likely seek to lease other available network infrastructure, as it has done in developing its own network to date.

Prices charged to other participants for network access would likely increase if UW System institutions do not participate in the networks.

If UW System institutions do not participate in the networks, prices charged to the remaining participants for network access would likely increase to fund the portion of the operating costs that would otherwise have been paid by UW System institutions. Such pricing increases would likely have the greatest effect on smaller networks, such as the Platteville and Superior networks, because the costs not paid by UW System institutions would be spread among fewer remaining participants. It is also possible that price increases could occur if UW-Platteville or UW-Eau Claire do not provide planned network support services, because it may be more costly for the networks to obtain comparable services from other participants or to purchase the services commercially. However, because construction and equipment costs were paid with grant funds and participant contributions, the prices charged to network participants would likely remain lower than the prices charged for commercial alternatives, regardless of whether UW System institutions remain involved.

The greatest potential effect may occur if UW-Eau Claire is not able to participate in, or contribute infrastructure to, BCCB's Chippewa Valley network. Project managers indicate that if UW-Eau Claire were to withdraw its infrastructure from the network, equipment would have to be relocated and the network would have to be

re-engineered, which could result in substantial additional costs. In addition, UW System relies on existing infrastructure used by the Chippewa Valley network to connect UW-Eau Claire to UW System's network. If UW-Eau Claire is not able to participate in that network, UW System Administration or UW-Eau Claire would likely need to procure alternative infrastructure at additional cost in order to provide needed internet access for the institution. Because UW-Eau Claire is providing the infrastructure as an in-kind contribution to the BCCB project, legal and administrative issues related to the grant may also need to be resolved.

Recommendation

We recommend UW System Administration report to the Joint Legislative Audit Committee by October 1, 2013, on the extent to which:

- *UW System institutions are providing administrative and operational support to the networks constructed with grant funds, as well as the type and scope of support being provided by each UW System institution;*
- *UW System owns portions of the Building Community Capacity through Broadband project's infrastructure, including the amount and type of infrastructure owned and how it plans to use this infrastructure in the future; and*
- *UW System has transferred, or plans to transfer, infrastructure ownership to any other entity.*

Future of UW System in Research and Education Networks

UW System institutions belong to research and education networks that allow them to share information with researchers in other states and countries.

UW System's institutions, particularly UW-Madison, are members of broader regional and national research and education networks that allow them to connect to and share information with researchers in other states and countries. The most prominent of those networks is Internet2, a high-capacity national network that allows member institutions to efficiently transfer large amounts of information to one another. UW-Madison is also a member of regional networks that serve a similar purpose, such as the Northern Tier Network Consortium, which connects UW-Madison to universities and research institutions in 12 other states across the northern portion of the country.

Because Act 32 will prohibit UW System institutions from membership in third-party entities that provide telecommunications services, UW System Administration and UW-Madison officials have expressed concern that current law could be interpreted by some as prohibiting participation in these networks. Although most participants in research and education networks are other universities, Internet2 and the Northern Tier Network Consortium's members also include corporate research entities and government agencies. Therefore, UW System institutions' membership in these networks may be inconsistent with the statutory requirement that they limit their membership to entities composed entirely of universities and university-affiliated facilities.

Prohibiting UW System institutions from participating in research and education networks could have significant effects on their ability to conduct research.

Officials of both UW System Administration and UW-Madison indicate that interpreting statutes to prohibit membership in research and education networks could have significant effects on the ability of UW System institutions to compete for new research grants and conduct research, which is essential to their missions. Officials are unsure whether connections with comparable bandwidth capacity are available through other providers and believe that any connections that are available would be significantly more expensive, which they believe could affect their competitiveness in keeping current research grants and applying for new grants. Moreover, staff indicate that UW System institutions could not operate collaborative research programs through commercial internet connections, because networking requirements would also require the other participants to use commercial connections instead of Internet2. Consequently, UW System officials believe several of its current federal grants would be threatened by the loss of access to Internet2 and other research and education networks.

For example, UW-Madison officials identified four large federally funded research projects with expenditures totaling \$50.4 million in FY 2011-12 that they indicated are dependent on access to Internet2:

- the Space Science and Engineering Center Projects, which involve the transfer of time-sensitive satellite data;
- IceCube, which involves the study of high energy neutrinos using ice-embedded sensors at the South Pole;
- the High Energy Physics Project, which involves obtaining data from the Large Hadron Collider operated by the European Organization for Nuclear Research; and
- the Open Science Grid, which is a computer science project involving data carried over multiple networks to assist researchers in data-intensive tasks.

Each of these projects depends on the ability of UW-Madison researchers to download large amounts of information from other research facilities or involves UW-Madison's responsibility for hosting data to be downloaded by other researchers.

Projected expenditures for these major research projects will total \$50 million per year through at least 2014, and officials believe other existing projects would be affected as well. In addition, officials state that the loss of Internet2 and other research and education networks would limit the ability of faculty to successfully compete for new research grants and to establish research collaborations with colleagues at other universities. A loss of grant funding and collaborative research opportunities could reduce the ability of UW System institutions to attract and retain faculty and to establish and retain jobs associated with grant-funded projects.

UW System Administration and UW-Madison officials believe that participation in research and education networks is consistent with statutory language establishing UW System's research mission and its ability to procure telecommunications services for purposes of carrying out its mission. Although many do not believe the intent of the law was to place restrictions on UW System's research activities, it is possible that its participation in these networks could be challenged in the state court system as a violation of the provisions of Act 32. If the Legislature is concerned about the potential for such a challenge, it could consider modifying statutes to clarify its intent for the relationship between UW System and research and education networks, such as Internet2.

■ ■ ■ ■

Appendix 1

Summary of Services Provided to WiscNet Members
FY 2011-12

Service Type	Service	Start-up Fee ¹	Annual Fee	Eligible for E-Rate Subsidy
Membership Fee	None ²	None	\$1,000	–
Network Services	Internet Service	Varies	Varies ³	Yes
	Dual Circuit Setup	\$200	None ³	–
	Web Address Registration ⁴	None	None	–
	Internet ²	None	None	–
E-mail Services	Hosted E-mail Service	None	\$26.50 per user	Yes
	E-mail List Hosting	None	None ⁵	–
	Spam and Virus Filtering ⁶	\$750	\$4.25 per user	–
Security Services	Managed Internet Firewall	\$500	\$1,575 if member owned, \$1,990 if WiscNet owned	Yes
	SSL Certificates ⁷	None	Varies ⁷	–
Web Services	Website Hosting	None	One gigabyte (GB) free, \$100 per additional 0.5 GB ⁸	Yes
	Content Filtering	\$300	\$1,600 plus \$4.85 per computer	–
Network Storage	Off-site Data Storage	None	\$5,100 per terabyte billed in 100 GB increments ⁸	–
	MasStore Pilot Program	None	Varies ⁹	–
WiscNet Consulting	Enhanced Technical Assistance Services	None	\$150 per hour	–

¹ A one-time fee is charged to initiate some services.

² Membership is required to use WiscNet services.

³ Internet service costs vary based on organization type and size.

⁴ Included in internet service.

⁵ Included in membership.

⁶ Included in WiscNet's hosted e-mail service at no additional charge.

⁷ Secure Sockets Layer (SSL) certificates are part of an internet protocol designed to enable users to transmit information securely. The amount of fees vary by certificate type and duration.

⁸ A gigabyte is equal to 1.0 billion bytes, or units of digital information. A terabyte is equal to 1.0 trillion bytes.

⁹ The annual fee is \$5,000 for institutions of higher education, \$2,500 for local governments, and \$1,000 for primary and secondary schools.

Appendix 2

**Survey Responses Related to Use of
WiscNet, BadgerNet, and Other Providers**
June 2012

Use of WiscNet and Other Entities as Internet Service Providers

User Type	WiscNet	Other Providers	Percentage Using WiscNet
Public School Districts	173	61	73.9%
State Technical Colleges	16	0	100.0
Public Library Systems	15	0	100.0
County Governments	14	19	42.4
Private Colleges and Universities	7	2	77.8
Cooperative Educational Service Agencies (CESAs)	3	0	100.0
Total	228	82	73.5

Reasons for Using WiscNet as an Internet Service Provider

	Unimportant 0	1	2	3	Very Important 4
Network Service Reliability	1	1	3	23	199
Ability to Handle Growth in Bandwidth Needs	1	0	6	28	192
Cost of Services	1	0	8	25	193
Quality of Technical Support	1	1	12	32	181
Amount of Currently Available Bandwidth	1	0	9	42	174
Ability to Coordinate with Other Users	10	19	60	61	71
Use WiscNet for Services Other than Internet Service	10	24	64	59	67
Access to Internet2	22	31	59	58	52

Reasons for Using Internet Service Providers Other Than WiscNet

	Number of Users ¹	Percentage
Cost of Services	50	61.0%
Network Service Reliability	30	36.6
Amount of Currently Available Bandwidth	26	31.7
Ability to Handle Growth in Bandwidth Needs	25	30.5
Quality of Technical Support	22	26.8
Availability of Services Other Than Internet Access	10	12.2
Not Aware of WiscNet	6	7.3
Other	20	24.4

¹ Users could select more than one reason for selecting a provider other than WiscNet.

Use of BadgerNet for Internet Connections

User Type	BadgerNet	Other Providers	Percentage Using BadgerNet
Public School Districts	171	63	73.1%
Public Library Systems	14	1	93.3
State Technical Colleges	4	12	25.0
CESAs	2	1	66.7
Private Colleges and Universities	1	8	11.1
County Governments	1	32	3.0
Total	193	117	62.3

Reasons for Using BadgerNet for an Internet Connection

	Number of Customers ¹	Percentage
Cost of Services	164	85.0%
Network Service Reliability	129	66.8
Amount of Available Bandwidth	124	64.2
Quality of Technical Support	105	54.4
Access to Distance Education Network	89	46.1
Only Available Provider	17	8.8
Other ²	13	6.7

¹ Customers could select more than one reason for using BadgerNet.

² Includes reasons such as having had long-term experience with BadgerNet and being a member of a consortium that chose to use BadgerNet.

Reasons for Using a Provider other than BadgerNet for an Internet Connection

	Number of Users ¹	Percentage
Cost of Services	69	59.0%
Amount of Available Bandwidth	56	47.9
Network Service Reliability	37	31.6
Quality of Technical Support	22	18.8
Only Use BadgerNet to Access State Systems	10	8.5
Unaware of BadgerNet	6	5.1
Other ²	29	24.8

¹ Users could select more than one reason for using a provider other than BadgerNet.

² Includes responses related to having had long-term experience with current provider.

Appendix 3

Telecommunications Providers Serving BadgerNet Customers
June 2012

Provider	Number of Locations ¹	Percentage of Total
AT&T	783	39.3%
CenturyLink	479	24.0
Frontier	404	20.3
TDS	128	6.4
Solarus	17	0.9
Price County Telephone	12	0.6
Chequamegon Telephone Cooperative	11	0.6
Niagara Telephone	9	0.5
Siren Telephone	9	0.5
Lemonweir Valley Telephone	8	0.4
Nelson Telephone Cooperative	7	0.4
Union Telephone	7	0.4
Mosaic Telecom	6	0.3
Marquette Adams Telephone Cooperative	5	0.3
Vernon Telephone Cooperative	5	0.3
Amery Telcom	4	0.2
Lakeland Communications	4	0.2
Baldwin Telecom	4	0.2
Tri-County Communications Cooperative	4	0.2
Richland-Grant Telephone Cooperative	4	0.2
Farmers Independent Telephone	3	0.2
MHTC	3	0.2
Northeast Telephone	3	0.2
Wittenberg Telephone	3	0.2
Amherst Telephone	2	0.1
Access Wisconsin	2	0.1
Belmont Telephone	2	0.1
Bloomer Telephone	2	0.1
Bruce Telephone	2	0.1
Citizens Telephone Cooperative	2	0.1
CLT Communications	2	0.1
Cuba City Telephone	2	0.1
Hager Telecom	2	0.1

Provider	Number of Locations ¹	Percentage of Total
Hillsboro Telephone	2	0.1%
Manawa Telephone	2	0.1
Sharon Telephone	2	0.1
Somerset Telephone	2	0.1
Spring Valley Telephone	2	0.1
Bayland Telephone	1	< 0.1
Coon Valley Farmers Telephone	1	< 0.1
La Valle Telephone Cooperative	1	< 0.1
Lakefield Communications	1	< 0.1
Not Specified ²	38	1.9
Total	1,992	100.0%

¹ A single BadgerNet customer may have multiple locations. For example, a school district may have BadgerNet connections at each school building in its district.

² Includes new connections requested but not yet installed as of June 2012.

Appendix 4

Network Connection Capacity for UW System Institutions
June 2012

BadgerNet		UW System Network	
Institution	Bandwidth Capacity ¹	Institution	Bandwidth Capacity ¹
UW-La Crosse	1 Gbps	UW-Madison	30 Gbps
UW-Platteville	1 Gbps	UW-Milwaukee	10 Gbps
UW-Stevens Point	500 Mbps	UW-Eau Claire	1 Gbps
UW-Superior	200 Mbps	UW-Green Bay	1 Gbps
UW-Waukesha	50 Mbps	UW-Oshkosh	1 Gbps
UW-Baraboo	30 Mbps	UW-Stout	1 Gbps
UW-Fond du Lac	30 Mbps	UW-Parkside	1 Gbps
UW-Marathon County	30 Mbps	UW-Whitewater	1 Gbps
UW-Marshfield	30 Mbps	UW-River Falls	1 Gbps
UW-Richland Center	30 Mbps	UW-Fox Valley ²	100 Mbps
UW-Rock County	30 Mbps		
UW-Sheboygan	30 Mbps		
UW-Washington County	30 Mbps		
UW-Barron County	30 Mbps		
UW-Manitowoc	30 Mbps		
UW-Marinette	30 Mbps		
UW-Fox Valley ²	10 Mbps		
Total	3.1 Gbps	Total	47.1 Gbps

¹ 1 Gbps is equal to 1,000 Mbps.

² UW-Fox Valley has connections to both UW System's Network and BadgerNet.

Appendix 5

Entities Served by Metropolitan Unified Fiber Network (MUFN)

Public School Districts

Madison Metropolitan School District

Middleton-Cross Plains Area School District

Monona Grove School District

Municipalities

City of Madison

City of Middleton

UW System Institutions

UW-Madison

UW-Extension Geological and Natural History Survey

Public Libraries

South Central Library System

Technical Colleges

Madison Area Technical College

Counties

Dane County

Other

DANEnet

Home Health United

Journey Mental Health Center¹

Olbrich Gardens

State Laboratory of Hygiene

United Way

University Research Park

UW Health

¹ Formerly Mental Health Center of Dane County.

Appendix 6

**Metropolitan Unified Fiber Network (MUFN)
Project Cash and In-Kind Contributions¹**

Entity	Cash Contributions	In-Kind Contributions	Total Contributions
City of Madison	\$ 41,750	\$3,223,200	\$3,264,950
UW-Madison	125,750	–	125,750
UW Health	84,000	–	84,000
Dane County	41,750	–	41,750
Madison Area Technical College (Madison College)	41,750	–	41,750
Madison Metropolitan School District	41,750	–	41,750
State Laboratory of Hygiene	41,750	–	41,750
University Research Park	41,750	–	41,750
Middleton-Cross Plains Area School District	14,000	–	14,000
City of Middleton	14,000	–	14,000
Monona Grove School District	14,000	–	14,000
South Central Library System	14,000	–	14,000
UW-Extension Geological and Natural History Survey	14,000	–	14,000
Total	\$530,250	\$3,223,200	\$3,753,450²

¹ Based on information reported in the federal grant application for the MUFN project.

² Does not match amount shown in Table 14 due to rounding.

Appendix 7

**Entities Served by Building Community
Capacity through Broadband (BCCB)**

Health Care Organizations

APPLE Pregnancy Care Center

Aspirus Wausau Hospital

Caillier Clinic, Ltd.

Children’s Service Society of Wisconsin

Chippewa Valley Free Clinic

Clinicare Corporation

Community Health Partnership

L. E. Phillips Libertas Center

Marriage and Family Health Services, Ltd.

Marshfield Clinic

Mayo Clinic Health System

Northwest Counseling and Guidance Clinic

OakLeaf Medical Network

The Open Door Clinic

Sacred Heart Hospital (Hospital Sisters Health Division System)

Spooner Health System

UW Health

Public School Districts

Augusta

Altoona

Chetek-Weyerhauser Area

Eau Claire Area

Fall Creek

Mondovi

Platteville

Rice Lake Area

Superior

Spooner Area

Wausau

Municipalities

City of Altoona

City of Augusta

City of Chippewa Falls

City of Eau Claire

City of Platteville

City of Spooner

City of Stevens Point

City of Superior

City of Wausau

Village of Fall Creek

UW System Institutions

UW-Barron County

UW-Marathon County

UW-Marshfield/Wood County

UW-Eau Claire

UW-Extension

UW-Madison

UW-Platteville

UW-Stevens Point

UW-Stout

UW-Superior

Counties

Chippewa

Douglas

Eau Claire

Marathon

Washburn

Technical Colleges

Chippewa Valley Technical College

Northcentral Technical College

Wisconsin Indianhead Technical College

Other Primary and Secondary Schools

McDonnell Area Catholic Schools

Newman Catholic Schools

Public Libraries

Wisconsin Valley Library Service

Platteville Library

Other

Beacon House Family Shelter

Bolton Refuge House

Boys & Girls Club of the Greater Chippewa Valley

Chippewa Valley Theater Guild

Eau Claire Area Chamber of Commerce

Eau Claire Area Hmong Mutual Assistance Association

Eau Claire Regional Arts Center

Educational Communications Board

Grace Lutheran Foundation

Heyde Health System (Assisted Living)

Hope Gospel Mission

L. E. Phillips Senior Center

Lutheran Social Services

Western Dairyland

Wisconsin Department of Transportation

Appendix 8

**Building Community Capacity through Broadband (BCCB)
Project Cash and In-Kind Contributions¹**

Entity	Cash	In-Kind	Total
Packerland Broadband (a division of CCI Systems, Inc.)	\$2,231,686	\$216,733	\$2,448,419
Wisconsin Department of Transportation	–	1,634,400	1,634,400
UW System Administration	1,631,000	–	1,631,000
WiscNet	1,325,000	74,866	1,399,866
St. Joseph’s Hospital (Hospital Sisters Health Division System)	600,000	367,878	967,878
Mayo Clinic Health System	600,000	341,497	941,497
City of Eau Claire	480,000	208,616	688,616
Eau Claire County	360,000	70,782	430,782
Chippewa County	364,000	46,493	410,493
UW-Eau Claire	75,000	175,433	250,433
Chippewa Valley Technical College	125,000	112,984	237,984
Marathon County	170,000	–	170,000
Northcentral Technical College	150,000	–	150,000
Wisconsin Indianhead Technical College	150,000	–	150,000
Chippewa Falls Area Unified School District	10,000	118,750	128,750
Washburn County	125,000	–	125,000
School District of Platteville	–	119,060	119,060
Eau Claire Area School District	60,000	45,736	105,736
City of Platteville	100,000	–	100,000
UW-Platteville	100,000	–	100,000
Spooner Health System	90,000	–	90,000
UW-Stout	80,000	–	80,000
UW-Stevens Point	50,000	–	50,000
CESA 10	20,000	28,500	48,500
Rice Lake Area School District	45,000	–	45,000
School District of Altoona	45,000	–	45,000
School District of Mondovi	42,500	–	42,500
UW-Superior	40,000	–	40,000
City of Wausau	–	39,000	39,000
UW-Barron County	25,000	–	25,000
UW-Marathon County	25,000	–	25,000
City of Chippewa Falls	20,000	–	20,000
City of Spooner	20,000	–	20,000

Entity	Cash	In-Kind	Total
UW Health	\$ 20,000	\$ –	\$ 20,000
Spooner Area School District	15,000	–	15,000
Chippewa Area Catholic Schools	13,000	–	13,000
Chetek-Weyerhaeuser Area School District	12,000	–	12,000
School District of Fall Creek	10,000	–	10,000
Indianhead Federated Library System	7,900	–	7,900
UW-Madison	4,000	–	4,000
Total	\$9,241,086	\$3,600,728	\$12,841,814²

¹ Based on information reported in the federal grant application for the BCCB project.

² Does not match amount shown in Table 16 due to rounding.



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December 12, 2012

Mr. Joe Chrisman
State Auditor
Legislative Audit Bureau
22 E. Mifflin Street, Suite 500
Madison, WI, 53703

Dear Mr. Chrisman:

We appreciate the opportunity to respond to the Legislative Audit Bureau's evaluation of the University of Wisconsin (UW) System's use of broadband services and its relationship with WiscNet. This evaluation covered many complex and highly technical matters, and we acknowledge the diligence required of Legislative Audit Bureau staff to research and convey these issues.

This report clarifies a number of long-standing misperceptions about WiscNet's relationship to the UW, as well as WiscNet's pricing structure, BadgerNet, and the impacts of Act 32 on the UW's teaching and research missions. In particular, we believe the report supports the following four points:

- (1) There is no evidence that the UW subsidized WiscNet operations.**
- (2) Market factors and WiscNet's business model, not subsidization by the UW, explain WiscNet's ability to charge lower fees than commercial service providers.**
- (3) WiscNet's cooperative model is lower cost for taxpayer-supported members.**
- (4) Unaltered, Act 32 will impact the UW's ability to sustain its research and education operations and fulfill its public mission.**

In the following sections, we provide further information on each of these four themes. Additionally, within Attachment A, we have included a specific response to address each of the five recommendations included within the report.

(1) There is no evidence that the UW subsidized WiscNet operations.

We are pleased that the Legislative Audit Bureau's thorough analysis of the financial records of both the UW and WiscNet revealed no efforts by the UW to subsidize WiscNet. Specifically, the report states:

- "WiscNet pays the salaries and fringe benefit costs for its staff, who are all employed by UW System institutions."

- “[The Legislative Audit Bureau] reviewed payments from WiscNet to UW-Madison and verified that WiscNet reimbursed UW-Madison for the institution’s reported costs of providing several services.”
- “In addition, we note that WiscNet has generated approximately \$5.8 million in excess of its expenses over the past five years. If WiscNet had set its fees at only the amount necessary to cover its costs, its fees would have been lower than those it actually charged over this period.”

However, we acknowledge and agree with the Legislative Audit Bureau’s recommendation that billings and other financial agreements between the UW and WiscNet should have been more formally documented. We are implementing processes that will strengthen the documentation of agreements with other parties, as well as comparative reviews of rates.

We also acknowledge that the report identifies fringe benefits as an area in which the amount paid to the UW by WiscNet for various fixed-price services resulted in over- or under-recoveries of costs actually incurred by the UW. As the report indicates, the UW and WiscNet entered into fixed-price contracts for various services. By their very nature, fixed-price contracts are not dependent on the amount of resources or time expended by the service provider in any one fiscal year. Rather, they are designed to provide predictability and efficiency over time, and the service provider is responsible for ensuring that the fixed price is set at a level to ensure costs are recovered over a multi-year partnership.

When initially entering into agreements, the UW and WiscNet agreed to use fixed pricing for a number of services because fixed pricing resulted in administrative efficiencies, and also created predictability in the fees charged to WiscNet to minimize the volatility of user rates – user rates paid largely by budgeted governmental agencies that have a strong need for predictability in rates. Because it is necessary to evaluate fixed-rate pricing on a multi-year basis and for various services provided to account for the ebbs and flows that can occur, we prepared the following three-year analysis of the two areas that include fringe benefits in which over- or under-recoveries could exist: (1) contract services, as discussed within the Legislative Audit Bureau’s report, and (2) fringe benefits on salaries of WiscNet personnel, which were billed using a fixed rate versus actual expenses. As evidenced in this three-year analysis, which shows that the UW recovered \$15,465 more than its costs, **the fringe rates charged to WiscNet were indeed sufficient to cover costs.**

Contract or Service	Over-/(Under-) Recovery (Contract Fixed Price Compared to Actual Costs)			
	2011	2010	2009	Total
Fringe benefits (contract services) \$	(99,700)	(69,233)	(60,602)	(229,535)
Fringe benefits (WiscNet salaries) \$	47,600	111,100	86,300	245,000
	<u>(52,100)</u>	<u>41,867</u>	<u>25,698</u>	<u>15,465</u>
WiscNet Operating Expenses \$	10,032,300	8,009,200	7,517,400	25,558,900
Net Over-/(Under-) Recoveries as a % of WiscNet Expenses	-0.52%	0.52%	0.34%	0.06%

Even if fiscal year 2011 was considered independently, the total identified fringe benefit under-recovery represents 0.52% of WiscNet's operating expenses. Based upon the average monthly charge of \$477 cited within the report, this would represent a difference of less than \$3 per month for an average WiscNet member.

(2) Market factors and WiscNet's business model, not subsidization by the UW, explain WiscNet's ability to charge lower fees than commercial service providers.

The Legislative Audit Bureau's report accurately identifies a number of relevant factors that result in WiscNet incurring lower operating costs than commercial providers. A primary factor in explaining WiscNet's low operating cost is the organization's long and successful history of negotiating no-charge data transmission "peering" agreements with other regional and national networks. As noted in the report, more than 99 percent of WiscNet's total traffic was transmitted at no charge to WiscNet under such peering agreements, and these arrangements facilitate WiscNet's ability to charge members a flat fee independent of how much bandwidth they use.

In addition, as the report outlines, WiscNet is a non-profit entity that is exempt from income tax, and further does not incur the level of certain operating expenses commercial providers do, such as for extensive advertising or marketing.

(3) WiscNet's cooperative model is lower cost for taxpayer-supported members.

In understanding the UW System's relationship with WiscNet, it is important to recognize that "WiscNet-like" entities exist in at least 38 other states. As the Legislative Audit Bureau's report highlights, these entities are frequently supported by university or state employees because these organizations are valued for their ability to benefit the public by providing the most cost-effective advanced networks. These services promote regional decision making, boost economic development, and transform research and education. In keeping with the promise of the "Wisconsin Idea," the UW System partnered with WiscNet to act as good stewards of taxpayer resources by providing services to education, library, and governmental partners throughout the state, providing mission-critical services essential for the university's education and research missions, and for the economic development of this state. This report suggests that by any measure, this approach has saved Wisconsin taxpayers millions of dollars over the last 22 years. Specifically, the report states:

- "WiscNet members would have paid more than twice as much, on average, for comparable bandwidth from two of the commercial providers, Solarus and Infinity. For the third provider, AT&T, WiscNet members would have paid more than twice as much for service under a two-year service commitment, but an average of 24.5 percent more under a three-year service commitment."
- "UW System indicates that it is expanding its network in order to obtain connections for its institutions at reduced cost... we estimate the total cost for UW-Parkside's internet connection over the life of the lease to be approximately \$3,000 per month. In contrast, UW-Parkside would have been charged \$11,652 per month for comparable bandwidth capacity under current BadgerNet rates."

- “In FY 2011-12, UW System paid \$1.6 million for 47.1 Gbps of capacity through its various lease agreements, while it paid AT&T \$1.1 million that year to obtain 3.1 Gbps of capacity for its institutions that were still served by BadgerNet.” Calculating these figures on a per Gbps basis demonstrates that the UW System lease agreements are less than one-tenth the cost of using BadgerNet.
- “However, at the time of [the Legislative Audit Bureau’s] fieldwork, UW System officials did not believe the direct and exclusive provision of services to its institutions was a preferred option, in part because they believe it would likely result in increased costs for UW System institutions and may adversely affect their connections with other research and education networks... In addition, this option would create challenges for WiscNet in serving its remaining members, which include approximately three-fourths of Wisconsin’s public school districts.”

Additionally, it is important to recognize that while much of this audit focused on the question of public subsidies of WiscNet, the report also accurately recognizes that BadgerNet is a subsidized network. Specifically, the report indicates that state-provided Technology for Education Achievement (TEACH) subsidies received by BadgerNet customers averaged approximately \$24.5 million per year. These subsidies flow to the private telecommunications contractors providing services under the BadgerNet contract.

(4) Unaltered, Act 32 will impact the UW’s ability to sustain its research and education operations and fulfill its public mission.

As the report highlights, 2011 Wisconsin Act 32 created new restrictions on the UW System’s involvement in telecommunications services, including prohibiting UW System institutions from being members, shareholders, or partners with any third-party entity that offers, resells, or provides telecommunications services beginning July 1, 2013, excluding entities composed entirely of universities and university-affiliated research facilities. Specifically, the report states:

- “Although most participants in research and education networks are other universities, Internet2 and the Northern Tier Network Consortium’s members also include corporate research entities and government agencies. Therefore, UW System institutions’ membership in these networks may be inconsistent with the statutory requirement that they limit their membership to entities composed entirely of universities and university-affiliated facilities.”
- “Prohibiting UW System institutions from participating in research and education networks could have significant effects on their ability to conduct research.”
- “A loss of grant funding and collaborative research opportunities could reduce the ability of UW System institutions to attract and retain faculty and to establish and retain jobs associated with grant-funded projects.”

The UW is carefully analyzing its options to ensure that it is compliant with Act 32 by July 1, 2013. However, we are extremely concerned about the pervasive (and likely unintended) consequences that Act 32 provisions will have on our teaching, research, and outreach missions. The biggest impact may occur in the UW’s effort to engage in advanced networking, research, educational collaborations, and other work that spurs statewide economic development. The UW System receives more than \$1 billion in federal research dollars annually and UW-Madison is consistently rated one of the largest and best research institutions in the world. The UW’s

leadership position is dependent upon the ability of campuses to participate in Internet2, the Northern Tier, BOREAS, Educause and other regional, national and international IT consortiums that will be prohibited by Act 32. This report clearly validates the UW's concerns. **We ask the Legislature to modify the statutes in order to avoid these crippling, unintended consequences.**

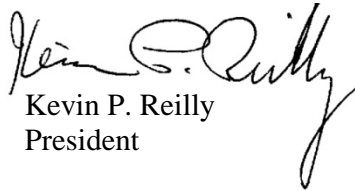
An additional area of concern is that Act 32 will result in multi-million dollar increases in network costs – forcing students and/or taxpayers to bear the greater costs.

Furthermore, prior to Act 32, the UW entered into the federally funded Building Community Capacity through Broadband (BCCB) grant agreement, which included a provision that the completed “project is not an entirely private closed network.” Our inability to comply with this grant provision will be costly to the UW System, as failure to comply with the grant requirements would necessitate that the UW return all the grant dollars (\$29.9 million).

Despite these concerns, the UW is thoroughly researching all options to ensure compliance with Act 32. As noted in the report, the UW has resigned its memberships on the WiscNet Board, and will withdraw from WiscNet as a member by July 1, 2013. Additionally, UW-Madison's Department of Information Technology will not serve as WiscNet's fiscal agent as of July 1, 2013, and negotiations are underway to divide comingled physical and financial assets.

Thank you again for the opportunity to comment on the Legislative Audit Bureau's report, as well as for the professionalism of your staff throughout the audit process.

Sincerely,



Kevin P. Reilly
President

Attachment A

Recommendation 1:

We recommend UW System Administration recover by June 30, 2013, any balance remaining from the \$2.3 million in excess payments it made to WiscNet for services to be provided to UW System institutions in future years and, in compliance with state law, lapse the amount recovered to the General Fund as a refund of expenditures.

UW Response: We accept the Legislative Audit Bureau's recommendation, and will recover the remaining balance of prepayments by June 30, 2013 and lapse the amount recovered to the State's General Fund. All prepayments expended to date have been incurred for allowable purposes.

In addition, it should be noted that UW System Administration has enhanced its processes and internal controls to ensure that all prepayments are supported with sufficient and appropriate documentation, including the reason for the prepayment and the period over which the prepayment will be expended.

Recommendation 2:

We recommend UW-Madison seek reimbursement from WiscNet for unbilled fringe benefit costs related to services it provided to WiscNet.

UW Response: Prior to seeking reimbursement for any unbilled fringe benefit costs, we believe it is prudent and necessary to perform a thorough analysis and calculation of all fringe benefit amounts potentially over- and under-recovered to ensure that amounts billed to WiscNet are appropriately supported. Therefore, we performed a three-year analysis of the two areas that include fringe benefits: (1) contract services, and (2) fringe benefits on salaries of WiscNet personnel, which were billed using a fixed rate versus actual expenses. This three-year analysis of fixed price contracts with fringe benefits components demonstrates that we recovered \$15,465 more than operating costs:

<u>Contract or Service</u>	<u>Over-/(Under-) Recovery (Contract Fixed Price Compared to Actual Costs)</u>			
	<u>2011</u>	<u>2010</u>	<u>2009</u>	<u>Total</u>
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Fringe benefits (WiscNet salaries)	47,600	111,100	86,300	245,000
	<u>\$ (52,100)</u>	<u>41,867</u>	<u>25,698</u>	<u>15,465</u>

As a result, we do not believe that seeking reimbursement for any fringe benefit costs would be appropriate.

Recommendation 3:

We recommend UW-Madison improve the procedures it uses when entering into fixed-price agreements, including:

- *Ensuring that the scope of all services is fully described in the agreements;*
- *Specifying the amounts to be paid for each service to be provided by the parties; and*

- *Regularly assessing the services being provided and promptly revising fixed-price agreements in instances in which experience shows that either the amount of services being provided or the cost of those services differs materially from what had been anticipated.*

UW Response: We agree with the Legislative Audit Bureau's recommendation, and are implementing processes to ensure that agreements with other parties fully describe the scope of services to be provided, as well as associated prices. In addition, we are implementing a periodic process to review and confirm that fixed-price contracts effectively recover all costs incurred.

Recommendation 4:

We recommend UWSA report to the Joint Legislative Audit Committee by July 1, 2013, on its plans for obtaining internet services, including:

- *The identification of any vendors selected to provide services; the types of services to be provided; the amounts to be charged for services; and the extent to which the vendor will use UW System resources, including its infrastructure and network monitoring services; and*
- *The extent to which entities outside of the UW System, such as school districts and other local governments, will receive services through the same arrangement as UW System institutions and whether UW System resources will be used in the provision of services to these other entities.*

UW Response: We agree with the Legislative Audit Bureau's recommendation, and will report to the Joint Legislative Audit Committee by July 1, 2013, as recommended.

Recommendation 5:

We recommend UWSA report to the Joint Legislative Audit Committee by October 1, 2013, on the extent to which:

- *UW System institutions are providing administrative and operational support to the networks constructed with grant funds, as well as the type and scope of support being provided by each UW System institution;*
- *UW System owns portions of the Building Community capacity through Broadband project's infrastructure, including the amount and type of infrastructure owned and how it plans to use this infrastructure in the future; and*
- *UW System has transferred, or plans to transfer, infrastructure ownership to any other entity.*

UW Response: We agree with the Legislative Audit Bureau's recommendation, and will report to the Joint Legislative Audit Committee by October 1, 2013, as recommended. In addition, prior to October 1, 2013, we would request the opportunity to present to the Joint Legislative Audit Committee additional information about the significant impact current statutory language will have on the UW System's ability to maintain its opportunities for advanced networking, research, educational innovation, collaboration, and economic development.