State Broadband Data and Development Grant Program

Program Narrative of the
California Public Utilities Commission

I) Executive Summary

For a number of years, California has understood the importance of broadband availability, and has adopted policies and programs 1) to assist in the nondiscriminatory deployment of broadband technologies and services throughout the state; 2) to promote broadband subscription and use throughout the state, and 3) to increase the provision of e-services by California government to make such services more easily available, efficient, and green.

The California Public Utilities Commission (CPUC) has been designated as the state entity eligible to apply for funding under this grant program. The CPUC is the expert agency in California for broadband availability mapping. Through a variety of state programs, we have collected, analyzed, and mapped a large quantity of broadband data.

In this grant narrative, we explain the funding that will be necessary to fulfill all of the requirements set forth in the State Broadband Data and Development Grant Program, Notice of Funds Availability (NOFA) and Solicitation of Applications (NOFA).[1] The expert GIS staff at the CPUC has a firm understanding of what is needed to undertake the interactive mapping application that the CPUC intends to create with this data. This expertise was used to create a detailed budget, outlining all hardware, software, personnel, and miscellaneous funds that the CPUC requests under this grant program.

Our 20% non-federal matching will be met fully through in kind contributions. These contributions include existing hardware and software currently in use to undertake existing broadband mapping programs at the CPUC, existing personnel positions staffed by highly skilled GIS and policy experts, and other contributions in the form of broadband availability maps and previously collected broadband data. The combined total of this in-kind contribution is more than sufficient to meet the 20% requirement.

Through the process described in this narrative, the CPUC intends to collect and furnish to the NTIA the broadband data required by the NOFA, to create and make available to the public an interactive state broadband availability map, to allow the NTIA to link to that map, and to carry on a broadband planning program in accordance with the NOFA and Broadband Data Improvement Act (BDIA).[2]

II) Map of Unserved and Underserved

The CPUC offers the following map to describe unserved and underserved areas in California. This map is an updated version of the one originally created by the California Broadband Task Force (Task Force), which collected broadband availability data at the street address level, including information on speed, grouping the sum of upload and download speeds

---

[1] State Broadband Data and Development Grant Program, Notice of Funds Availability (NOFA) and Solicitation of Applications, 74 Fed. Reg. 32,545, 32,565 (July 8, 2009) (State Broadband NOFA)

[2] Broadband Data Improvement Act of 2008, Pub. L. No. 110-385, 122 Stat. 4097 (codified at 47 U.S.C. §§ 1301-04) (BDIA)

in the categories shown. Addresses reported to be served were mapped as a one square kilometer area around the service address. The CPUC has updated the map with information garnered through our California Advanced Services Fund (CASF) grant process, as well as from regional demand aggregation projects funded by the California Emerging Technologies Fund (CETF). This map shows unserved areas within the state of California in grey, with other colors indicating the highest speed at which service is offered.
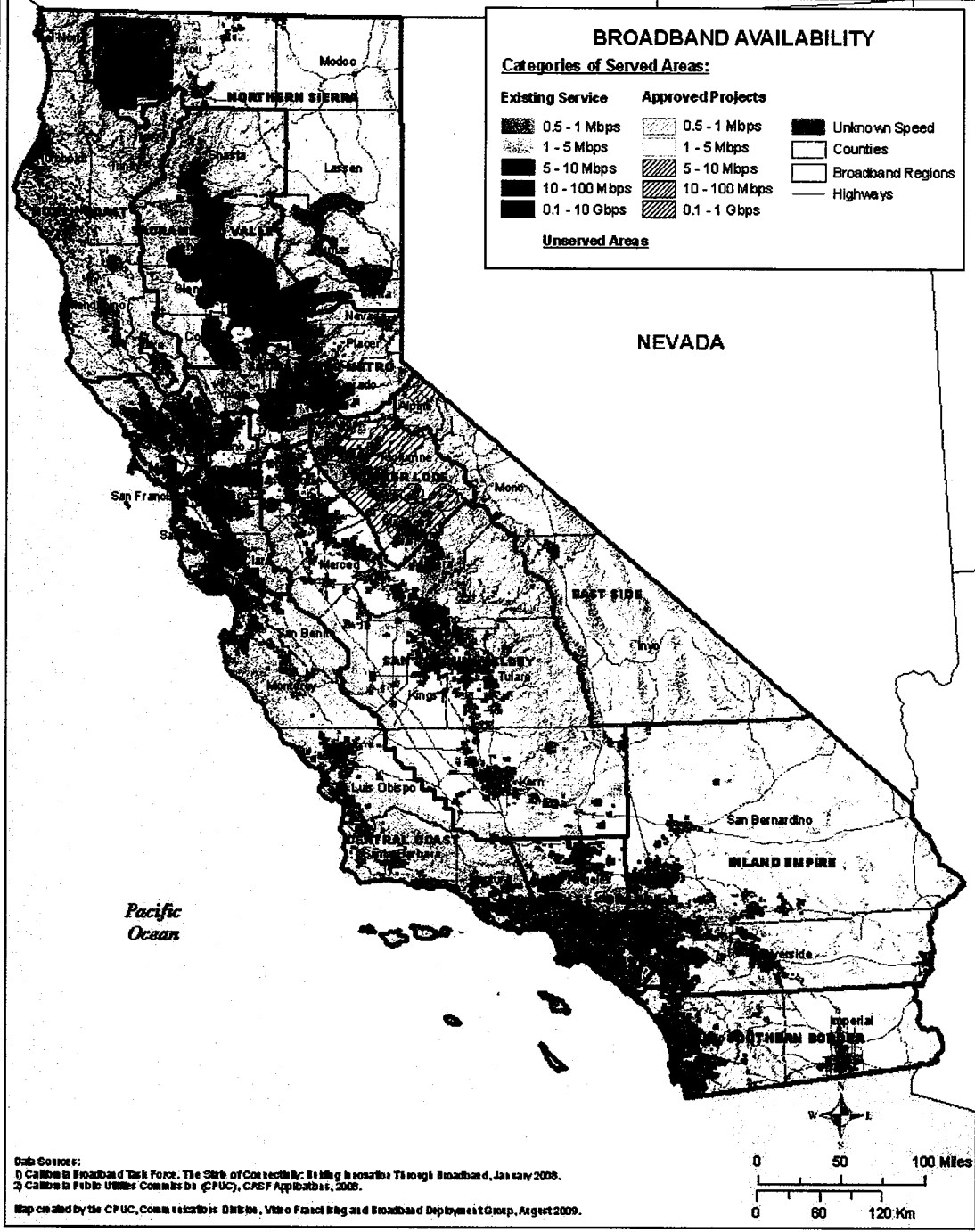
While the CPUC will adopt the NOFA's definition of unserved and underserved for purposes of our obligations under the NOFA and BDIA, this map reflects the definition of unserved used by the Commission and the Task Force at the time this map was created, Unserved, under this definition, means areas where there is no broadband service available with upload or download speeds over 200kbps..

Further, the availability and speed data California has collected to date do not allow us to identify underserved areas with precision. The CPUC's pre-NOFA definition of underserved refers to areas where there is no service provided at speeds greater than 3 Mbps download and 1 Mbps upload. The speed tiers defined by the BBTF, as shown on this map, are constructed by adding upload and download speeds together. Thus, we consider the areas of service with the .5 – 1 Mbps speed tier to be underserved, as well as undetermined portions of the 1 – 5 Mbps speed tier, which include combined speeds of both slower and faster than 3 down/1 up.

The CPUC does not currently have access to the raw address-level data collected by the Task Force, as a result of the NDAs entered into with the individual service providers. Further, the FCC's Form 477 data is collected at the census tract level and does not have sufficient granularity to allow for calculation of penetration at the block level. Moreover, the latest Form 477 data has not yet been released. Therefore, the NOFA's definition of underserved, which involves the extent of availability and penetration within a census block, cannot be determined by the available data.

STATE OF CALIFORNIA
Wireline and Fixed Wireless Broadband Availability

BROADBAND AVAILABILITY

Categories of Served Areas:

Existing Service	Approved Projects	
0.5 - 1 Mbps	0.5 - 1 Mbps	Unknown Speed
1 - 5 Mbps	1 - 5 Mbps	Counties
5 - 10 Mbps	5 - 10 Mbps	Broadband Regions
10 - 100 Mbps	10 - 100 Mbps	Highways
0.1 - 10 Gbps	0.1 - 1 Gbps	

Unserved Areas

NEVADA

Modoc

NORTHERN SIERRA

Lassen

Shasta

SURAM VALLEY

Nevada

Placer

METRO

San Francisco

Mono

MERCED

San Benito

EAST SIDE

Inyo

San Joaquin

Tulare

Kings

Kern

Luis Obispo

San Bernardino

CENTRAL COAST

INLAND EMPIRE

Pacific
Ocean

Riverside

Imperial

NORTHERN BORDER

Data Sources:
1) California Broadband Task Force. The State of Connectivity: Building Innovation Through Broadband, January 2008.
2) California Public Utilities Commission (CPUC), CASF Applications, 2008.

Map created by the CPUC, Communications Division, Video Franchising and Broadband Deployment Group, August 2009.

0   50   100 Miles

0   60   120 Km

III) **5 criteria (discuss in separate sections)**

A) **Data Gathering**

1) **Data required under the** *Technical Appendix*

The Technical Appendix for State Broadband Data and Development Grant Program requires grant awardees to provide NTIA with detailed data for each broadband service provider within their state. This data includes:
1) Broadband Service Availability in Provider's Service Area
2) Residential Broadband Service Pricing in Provider's Service Area
3) Broadband Service Infrastructure in Provider's Service Area

The CPUC plans to obtain all provider-specific data required by the Technical Appendix by way of a formal Data Request sent to all identified broadband service providers in California. Data Requests are commonly used by the CPUC to collect information from telephone corporations and service providers that is needed faster than a formal docketed proceeding could accommodate. Given the short time frame for this application process, the CPUC believes that using a data request is the quickest and most efficient method for getting the information required by the Technical Appendix of the NOFA. We intend to send the Request on or around September 1, 2009. Concurrently, in accordance with the NOFA modification, we will be working with the industry on the wording of a Non-Disclosure Agreement (NDA). We anticipate that process will take approximately a month to complete.

This Request will ask providers to gather and remit all data required by the technical appendix of the NOFA, in the format it requires, to the CPUC no later than September 30, 2009. A copy of the Technical Appendix will be included with the Request to provide a guide for data submission.

This Request will be sent to all broadband service providers we can identify that may be operating in California, including the following: all broadband providers that reported to the FCC via Form 477 in March of this year, carriers certified and registered with the CPUC, other Internet Service Providers (ISPs) and Wireless Internet Service Providers (WISPs) identified through trade association lists, the contact list created by the CETF demand aggregation teams, holders of video franchises, respondents under the CASF program, and other entities that may be identified by the CPUC. We intend to use the list of broadband providers that filed Form 477 on March 16, 2009, recently released by the FCC, to define the complete set of broadband providers.

We anticipate substantial compliance with this data request on or before September 30th. To the extent that responses to our Request are not received by the Commission, however, we will request that the NTIA ask the FCC to compel nonresponsive service providers to provide the data required, as set forth in the NOFA. If such a case should arise, we shall submit the data we have collected, along with a description of the steps being taken by the CPUC to obtain the remaining data.

2) Community Anchor Institutions

The Technical Appendix of the NOFA further requires grant awardees to provide the NTIA with a list of community anchor institutions along with associated information related to broadband availability. In order to carryout this requirement, the CPUC will collect and assemble data for the following Community Anchor Institutions. Presented with each institution is the known source in California databases, and the approximate number of records in each category:

- Schools; K through 12 – The California Department of Education (http://www.cde.ca.gov/index.asp) manages the list of public schools Kindergarten through 12th grade for the state. This data is currently served through a number of statewide accessible databases including the California Longitudinal Pupil Achievement Data System (CALPADS) and the SchoolFinder (http://www.schoolfinder.ca.gov/) website. Currently approximately 12,000 institution locations. In addition the Corporation for Education Network Initiatives (CENIC - http://www.cenic.org/) in California is the non-profit institution tasked with managing high-bandwidth networking between educational institutions in the state. CENIC will also provide data on the location of schools and service to ensure all locations are collected. These data are stored at the address level.

- Libraries – The California State Library (http://library.ca.gov/) coordinates the California Public Library system and maintains a database of all public library branches in the state. Currently there are approximately 1,200 public library branches in California. These data are stored at the address level.

- Medical/Healthcare – The California Department of Public Health (http://www.cdph.ca.gov) is the licensing agent for all licensed healthcare facilities statewide. Currently there are approximately 7,000 licensed healthcare facilities operating in California in the Electronic Licensing Management System (ELMS) database. These data are stored at the address level.

- Public Safety – The Public Safety Communications Division of the Office of the State Chief Information Officer implements the statewide 911 and e911 programs. As such they maintain databases of the Public Safety Answering Points. Currently there are over 25 California Highway Patrol, 21 California Department of Forestry and Fire Protection and over 400 local police Public Service Answering Points. These data are managed at the address level.

- University, Collect and Post-Secondary – The California Postsecondary Education Commission (CPEC - http://www.cpec.ca.gov/) is the state entity in California who oversees data collection on the postsecondary institutions in the state. Currently there are 476 institutional locations in the Institutional Accountability and Student Information System at CPEC. These data are stored at the address level.

- Other Community; Government – The California Department of General Services maintains the State Property Inventory. Currently there are over 30,000 locations of state owned and rented property in this Database. This data is maintained at the address level.
- Other Community; nongovernmental – There is no single database from which to draw other community – nongovernmental locations. However, we intent to engage in the following state agencies to supply locations for these data source; 1) The California Secretary of State is the authority over 501(c)3 organizations in the state; 2) the California Department of Corporations maintains data regarding business operating in the state and 3) the Employment Development Department maintains data for all entities employing more than 5 individuals in the state. All of these data are maintained at the address level.

Two primary methods will be employed for collecting and assembling this data to provide to NTIA. First the CPUC will form partnerships with each of the above mentioned providers to acquire the data. Second the CPUC will cross reference the data with provider data collected in Section 1 of Technical Appendix (Broadband Service Availability). These methods are described below.

Partnership Data Collection – CPUC will reach out to each of these listed state agency and partner institutions described above. The mapping team has engaged each of these partners already to acquire data on the records and locations of these community anchor institutions. CPUC will request the data in the format described in the Technical Appendix Section 4. CPUC will run basic quality assurance on each of the received files (e.g. fields with blanks/nulls, locations outside the state, incorrect category codes etc). For those institutions which do not have this information geocoded, CPUC will use the enterprise geocoding solution at CalAtlas to geocode the available data. All received data will be tagged with metadata stamps including the source, the published data date, and full contact data. Metadata will follow Federal Geographic Data Committee metadata standards. All records will be appended into one master file, with metadata tags linking each record back to the source file.

Cross Reference Data - Some of the above institutions who will be providing data to us do not maintain broadband service, technology and up/downstream speed information. For those institutions that provide this data, CPUC will ensure the consistency of the data submitted through field quality assurance checks. For those institutions that do not provide this data, CPUC will use the provider data from Section 1 of the Technical Appendix. Our geocoding effort will be based on a statewide parcel map. We will geocode the above data and the data collected through Section 1 (Address service) on this parcel base and ensure a common field linkage in each geocode. That common field linkage will be the County FIPS Code + the County Assessors Parcel Number (APN). A database relationship on the combined code (FIPS + APN) will allow the transfer of the broadband service, technology and up/downstream speed collected from the provider service area service address collected in Section 1 to the Community Anchor locations in Section 4. This method will give the CPUC the most accurate assemblage of locations for source database systems in California government and provider speed/technology availability from providers.

Data regarding these institutions will be used to create a mapping layer that will allow the public, as well as policymakers, to see where broadband is available in conjunction to the

location of these important institutions. This concept is discussed in more detail in the accessibility section, below.

The CPUC intends to submit a substantially complete list of all California community anchor institutions as soon as possible. At minimum, a partial list will be available by the November deadline. Should the data submitted at that time not be substantially complete, we will include a notice of intent to submit the data when it is available to us. This notice will include a description of what further information we need, what steps are being taken to collect the remaining data, and an anticipated completion date. We anticipate providing a substantially complete list of these institutions by the March filing deadline.

3) Accuracy and Verification

Accuracy of mapping information is paramount to effectively managing the deployment of broadband service. Once the CPUC receives data from broadband providers, per the requirements of the Technical Appendix of the NOFA, it must be checked for accuracy, geocoded, and verified. As discussed above, the CPUC intends to collect broadband data in the exact manner that the technical appendix prescribes. This collection method will provide the most precise data against which to compare existing data sets to verify accuracy.

<u>QA/QC process</u>

After data is collected from broadband service providers it must go through a quality control process before further verification or analysis can be performed on it. This requires first determining whether the data collected matches the requirements set forth in the NOFA.

First, the CPUC must compare parties that submitted data to the CPUC against the original list of providers in California. This will allow the CPUC to determine if there is a complete data set. Next, we must correct and standardize addresses by which the data might be submitted. This will allow for ease of database organization. These addresses must also be compared to the master address list for California to ensure that correct addresses were submitted. Should providers submit data by census block or street segments, as specified in the clarifications to the technical appendix, the CPUC will verify the locations using the statewide parcel map. Finally, the CPUC must determine whether all required data for each sub-part of the following record formats (as listed in the Technical Appendix of the NOFA) have been submitted:

- Address data for each provider (wireline providers – as amended by the NTIA)
- Availability area data for each provider - (wireless providers)
- Residential broadband service pricing and speed characteristics by county for each provider (as amended by the NTIA)
- Last-mile connection points for data for each provider (if submitted)
- Middle-mile and internet backhaul connection points for data for each provider
  Once this initial process is complete, the CPUC can begin the next steps of geocoding and verifying the accuracy of submitted data. All three steps in the process are imperative for delivering a complete data set to the NTIA.

<u>Geocoding Process</u>

Next, the individual records submitted by each service provider must be geocoded in order to be mapped. CalAtlas (http://www.atlas.ca.gov) is the central repository for geospatial

data in California. It houses the state spatial data library, the ability to publish, discover, and download data and services for all GIS use. CalAtlas has been the central repository of GIS data in the State for over 10 years. Recently, CalAtlas has established a central geocoding service (http://projects.atlas.ca.gov/projects/geocoder). The geocoding service is based on US Census Bureau TIGER/Line Street data from 2008. The service covers the entire United States including insular areas and territories, and is available for batch geocoding. The state intends to develop this service as a composite geocoding service such that the first layer of geocoding is based on a statewide parcel data layer and the second layer in the composite is based on the TIGER 2008 data. The expected completion date for Parcel data is January 2010, and inserting and tuning the data into the composite service should be feasible for the March deadline. The batch engine is service based, whereby we, the CPUC, can upload a file to be geocoded and the file returns geocoded records, score of geocode, service the records geocoded on, error rate, and ancillary data include XY coordinates and, if necessary, feature identifiers of the source data (e.g. parcel ID, street ID). This service is free for all State of California use and is secure.

Additional Verification

In order to verify the accuracy of broadband availability data collected under this program, the CPUC will utilize many different methods. First, the CPUC will compare the data to all broadband data sets that are currently available to us. These other data sets have been compiled using broadband availability and subscribership data collected in California through various state programs including the Digital Infrastructure and Video Competition (DIVCA) Act Program, the Task Force, and the CASF program. This will allow for multiple comparisons of broadband availability data sets to assess the accuracy of data submitted by service providers under this program. For example, areas shown as having broadband availability by a particular provider under this program that are not shown as having broadband availability using data currently available to the CPUC may indicate error that must be corrected by the service provider.

Next, using data collected via the FCC's Form 477, we can compare the availability data submitted under this program with subscribership data submitted by the same broadband service providers. This data is currently collected at the census tract level. The CPUC has urged the FCC to provider eligible entities access to raw Form 477 data as quickly as possible to allow for this type of analysis. While we do not have street-address specific data as a result of data collection under these other programs, comparison by census track, block group, or parcel to data provided by service providers will provide for comparison. Also, to the extent that we receive infrastructure data from broadband providers, we will compare it to submitted availability data. If there is availability, there will presumptively be infrastructure present in the same locations, and vice versa. If there are no blatant anomalies between compared data sets, the newly submitted data will be considered accurate.

We further intend to engage the Program for Applied Research and Evaluation at California State University, Chico (CSU Chico) to use on-the-ground or telephone surveys to check a statistically significant sample of all addresses, and a statistically significant sample of rural addresses to assure accuracy of the data. Finally, the CPUC will use our interactive state-level map to establish a transparent system for internal and external verification of broadband availability data. Broadband inventory maps represent a visual, geographic estimation of broadband coverage within a state or territory. As such, maps are an estimation of the true extent of the network and, hence, present inaccuracies that can only be identified and corrected as the

data is used, analyzed and verified. Data verification is, therefore, a critical component of any effective mapping program. This verification system will include a Web-based, interactive mapping portal where the CPUC, consumers, local leaders, broadband providers and other stakeholders can analyze broadband availability represented in the map, searchable by address. This will allow for feedback to the CPUC of where there is accurately represented data.

4) Accessibility

a) Public Accessibility of Data

The CPUC intends to make broadband availability data available to the public by way of an interactive map of broadband service in the state. The broadband availability data submitted by service providers will be compiled, geocoded, and loaded into GIS software to create a completely interactive map illustrating broadband availability.

This map will be available to the public as a whole via the internet. It will allow members of the public, government, and research communities to access specific information in a variety of ways that suit their specific needs. We understand that different parties will have different needs when accessing this map. For example, consumers will likely be more interested in whether there is broadband available at a specific address. Meanwhile, other parties may be interested in where there are large areas where no broadband is available. The interactive functions will allow users to tailor and select their view of the broadband map to meet their specific needs. These are described in more detail below. The CPUC believes that this is the best way to provide easily accessible information about broadband in the most usable way to meet the unique needs of a broad spectrum of audiences.

In order to implement an interactive map to make data collected under this program as usable and widely available as possible, it must have dedicated data hosting specifically designed to store, maintain, and allow access to users. This requires extensive data storage equipment, security software to protect the data from access by outside sources, access certification systems, and other technological components for creating and maintaining the interactive map.

For the first 2 years the web-based interactive map will be hosted in the CalAtlas system that has adequate disk space and memory in its servers to run this application more robustly for the anticipated large numbers of hits against this interactive map. CalAtlas runs on ArcGIS Server, the GIS software capable of creating, rendering and hosting web-based mapping applications. Since the maps created at the CPUC are in ArcGIS Desktop, the desktop version of ArcGIS, there will be very little adjustment needed in order to convert the map documents to web-based mapping applications. The ArcGIS Server software has several functionalities that can be turned on and customized in the interactive maps that will make them easier to use and more dynamic to web users. During the 2-year period of hosting at CalAtlas, CPUC will build and upgrades its GIS servers so that sometime at the beginning of the third year CPUC will be able to host the web-based interactive map in-house. The GIS software on the servers will be fully compatible with the CPUC's ArcGIS Servers, so there will be no compatibility issues once this transfer is made.

The CPUC plans to use an ArcGIS server to meet these requirements. ArcGIS servers have the web mapping capabilities necessary to implement, host, and maintain such a map. The CPUC believes that having this type of data hosting available internally will prove invaluable for not only this grant program, but also CPUC mapping production and capabilities over all.

The CPUC was designated as the sole applicant for California under this grant program in large part because of our existing mapping experience. Programs such as DIVCA and the CASF have required extensive mapping using broadband data collected directly from the broadband service providers themselves. These maps have helped Commission staff, service providers, and the public understand the broadband landscape of California.

The required software and equipment for this internal data hosting will be included into the budget for this mapping grant request.

### b) Proposed State-Level Map

California intends for the state-wide inventory map to be fully interactive in order to optimize utilization of the broadband data contained therein. Interactive maps provide many opportunities for distributing broadband information to the public via the Internet. They provide a highly scalable framework for mapping, web publishing and analysis using a variety of layers at different geographic scales, including states, counties, municipalities, congressional and senatorial district, zip code, and census boundaries (tract, block group, block, and place).

As with the NTIA national map, the California map will be searchable by address. It will include the state-wide parcel map layer, topography and geographic data, and elevation. Further, we intend to layer broadband subscriber data, available via the FCC's Form 477, on the same map in order to show broadband penetration rates.

Our State-level map will be readable to anyone via the Internet using a standard web browser, and will give the viewer the capability to view specific, selected areas, query specific data sets for those areas, and print the maps generated by any specific query. Further, this interactive map will provide access to the most up-to-date information and use specialized tools, such as layer selection, panning, zooming, and querying features, for retrieving information. This interactive mapping system will provide:

- 24-hour online interactive mapping, available from one the CPUC website;
- Up-to-date broadband information to consumers, providers, government agencies, and other interested parties;
- Interactive maps showing broadband information on a state, county, municipal, congressional and senatorial district, zip code, and census geography level (tract, block group, and block);
- High quality cartographic capability with elaborate panning and zooming;
- A wide variety of querying options including geographic and governmental boundaries, census data, and specific broadband data;
- The ability to easily create printer-friendly online maps and to support multiple output formats-JPG and PDF; and
- The ability to share data and maps locally, over networks, or the Internet, allowing the public, providers and the government to view and interact with maps simultaneously.

The screen shot below shows a preliminary view of the CPUC's proposed state-level interactive map.
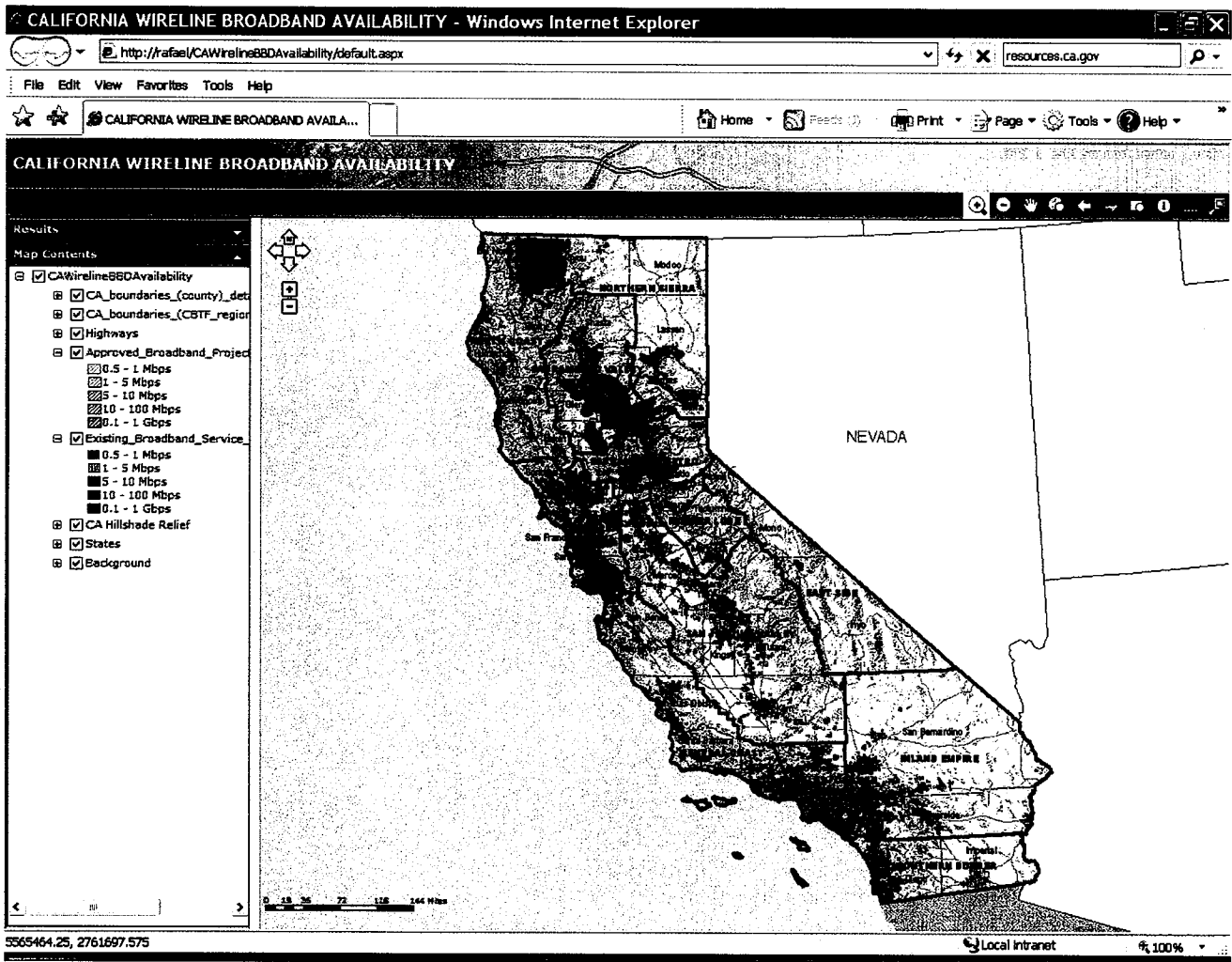
5) Security and Confidentiality

The NOFA makes quite clear that eligible state entities "shall treat any matter that is a trade secret, commercial or financial information, or privileged or confidential, as a record not subject to public disclosure except as otherwise mutually agreed to by the broadband service provider and the eligible entity."[3] The CPUC intends to perform all state-level mapping internally and, therefore, understands the responsibility to protect confidential data. We take this requirement very seriously. It is our intention to provide thorough information to the public regarding broadband availability within the state without disclosing any Confidential Information, as defined in the NOFA.

Contents of the state-wide map will, at a minimum, include:

---

[3] State Broadband Data and Development Grant Program, Notice of Funds Availability (NOFA) and Solicitation of Applications, 74 Fed. Reg. 32,545, 32,565 (July 8, 2009) (State Broadband NOFA), BDIA

(a) Geographic areas in which broadband service is available;

(b) The technologies used to provide broadband service in such areas;

(c) The spectrum used for the provision of wireless broadband service in such areas;

(d) The speeds at which broadband service is available in such areas; and

(e) Broadband service availability at public schools, libraries, hospitals, colleges and universities and all public buildings owned or leased by agencies or instrumentalities of the states or municipalities or other subdivisions of the states and their respective agencies or instrumentalities.[4]

Our interactive state map will not display or disclose any information that is considered confidential under the terms of the NOFA, BDIA or any NDAs the CPUC enters into under this grant program. Pursuant to NTIA's clarification of the NOFA, the map will include the identity of individual providers.

In addition to confidentiality protections contained in the map itself, the CPUC has a number of safeguards in place internally that will serve to protect the security and confidentiality of data submitted under this grant program. The CPUC plans to host all confidential data collected through this program internally. As such, the Commission's internal data center will be responsible for the physical security of the proposed systems. Access to that secured data center is restricted to authorized users and controlled by an encoded card-key system. Information stored on the proposed systems will be secured at the application level as well as at the operating system level by authorized administrators. Confidentiality will be maintained through the use of industry standard policy-based security management to provide authorized access for system users, based on their identity and role(s) within the application.

Software solution vendors will be required to deploy systems that enforce data integrity, confidentiality and system security. Access to the systems must conform to Windows user ID and password authentication with permissions (roles) granted by system administrators. Employees of any vendor that need access to Confidential Information will be required to sign an NDA acknowledging that they have read and understood CPUC's confidentiality requirements, and agree to be bound by them. These agreements will be used to assure that the CPUC knows exactly who has access to the data collected through this grant program. This will assure transparency of process for the purposes of the requirements set forth in the NOFA. Further, when staff change positions or leave the CPUC, their access authority will be modified as appropriate.

The CPUC believes that the above mentioned confidentiality measures will serve to protect the proprietary nature of the data submitted by broadband service providers under this grant program.

---

[4] NOFA

B) Project feasibility

1) Applicant Capabilities

(a) In-Kind Match

Personnel - The brunt of the CPUC's proposed in-kind matching comes from the work that CPUC personnel will perform that will not be reimbursed by the grant. Below is a list of all of the existing positions that will be involved in implementing and maintaining the requirements of this program. The monetary amounts associated with each of these positions are listed in the detailed budget spreadsheet attached with this narrative. No indirect costs are included in the value of the in-kind work to be performed.

- Associate Information Systems Analyst (Specialist) - GIS Project Specialist (ISB): Responsible for GeoDatabase Administration and Development, GIS Applications Development (ArcGIS and ArcGIS Server). Interface with Technology Services Unit (TSU), Application Development Unit, and Communications Division GIS Team.
- Research Program Specialist II (GIS) - Principal GIS lead for Broadband mapping project, involving Broadband data acquisition, data analysis, GeoDatabase development, GIS applications development (web based, etc.). Interfaces internally in CPUC with ISB and manages GIS Team. Externally Interfaces with Broadband data providers and works cooperatively with other GIS professionals throughout the state of California to promote advanced digital mapping .
- Research Analyst II (GIS) - GIS Project Analyst: Responsible for QA/QC Broadband data and GIS data analysis. Interface with external broadband data providers.
- Public Utilities Regulatory Analyst II - GIS Project Analyst: Responsible for QA/QC Broadband data and GIS data analysis. Interface with external broadband data providers.
- Public Utilities Regulatory Analyst III - Responsible for legal policy analysis for CPUC regulatory actions.
- Project and Program Supervisor, PUC - Supervising, coordinating entire Broadband Mapping project. Interfacing with vendors and Broadband providers. Supervising staff.
- Commissioner, or other senior officials, PUC
- CEA III - State Geospatial Information Officer

The total direct compensation for this in-kind contribution over the 5 year grant period is $734,841.

Geocoding – As discussed above, the CPUC intends to utilize the services of CalAtlas in order to geocode all of the data submitted to us by broadband service providers under this program. Further, for the first two years of this program, the CPUC intents to use CalAtlas servers to store geocoded data and host the online mapping applications. These geocoding services are free to the CPUC, but are extremely valuable. The total in-kind contribution for this service over the 5 year grant period is conservatively valued at $50,000. The Commission itself has a contract with a third-party vendor to purchase geocoding services, which it has used, at a per-query price that would be many times the valuation we are placing on the CalAtlas service.

Existing Data – As discussed above, the CPUC intends to use existing data sets and maps created by the state, for verification comparisons. The Task Force maps were originally created in 2006-

2007 at a cost of $500,000. These maps were updated over the past two months by CPUC personnel with the addition of current information from CASF applications and challenges for 2008 and 2009, and data gathered from additional broadband providers by CETF-sponsored regional aggregation teams. In addition, we intend to provide to the NTIA broadband maps and data developed by CPUC staff through data collected from state video franchise holders under DIVCA. We are attributing a conservative value of $500,000 for these data sets and maps, less than the cost of creating the Task Force map alone. We believe actual in-kind value is far greater than the $500,000 we are attributing to these items.

Parcel Map - Under the lead of the Michael Byrne, the GIO for the State of California, parcel data is being collected from local assessors statewide. This data is being used to create a state parcel data mapping layer that will ultimately be used by CalAtlas to geocode the data collected under this program and by the CPUC to geoprocess the broadband data. The total for this proposed in-kind contribution for this parcel map layer is conservatively valued at $50,000.

Total In-Kind Value – The following table displays the total in-kind contributions associated with this grant, totaling $1,398,753. This amount represents 33% of the total grant sought in this application, satisfying the 20% non-federal matching requirement as set forth in the NOFA.
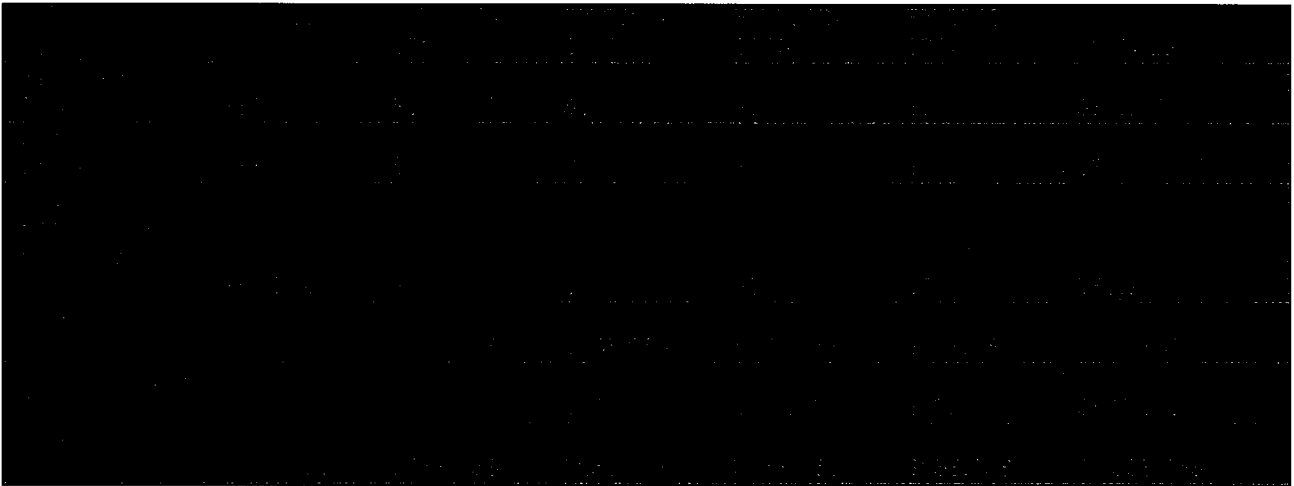
(b) Budget Narrative

The CPUC has compiled a detailed list of necessary hardware, software, personnel costs, etc. needed to carry out the data collection, verification, storage, and mapping requirements of this program. This information is contained in the detailed budget spreadsheet submitted with this narrative via www.grants.gov. This narrative explains these needs.

With funds from this grant program, the CPUC intends to set up a GIS infrastructure in order to 1) store the data collected from broadband service providers; 2) analyze the data using GIS software; and 3) publish collected broadband data by means of an online mapping application. Below is a detailed description of the hardware, software, personnel, and other costs associated with these tasks.

Hardware

In order to create the GIS infrastructure necessary to fully utilize all broadband data collected under this program, the CPUC requires several complex pieces of GIS enabled hardware. This hardware includes the following:

- 5 ArcGIS Servers – These servers are used for data storage
- Second Internal GIS Server exclusively for Broadband Mapping Applications
- Backup Solution and SAN Storage for off-site locations: (San Francisco, Los Angeles, Sacramento)
- Offsite Data Storage – CalAtlas (Years one and two)
- GIS Data/Web Applications Outside Hosting
- GIS Workstation Upgrades
- GIS Laptop Computer

The CPUC will need five servers, acquired at different stages throughout the five year period of this grant program, for storing the large amount of raw data that the CPUC anticipates receiving from broadband providers. Further, this server space will be needed for both geoprocessing of data and storing the data once the processing is complete. In years one and two of this program, the CPUC will utilize the server capacity of CalAtlas to host the online mapping application associated with this program. In year three, however, the CPUC will host online mapping ourselves and will require adding capacity in order to host the ever-increasing amount of data and additional bandwidth to accommodate the anticipated number of hits to the CPUC website from the public accessing the online mapping application.

ArcGIS servers are being used because they are the industry standard for GIS software. This software is needed for online deployment of broadband data maps. Further, this hardware and software combination can be used for creation of other mapping related documents, including spreadsheets, queries, reports, and charts. These servers carry with them inherent maintenance, backup, security, and licensing costs. Further, to fully utilize them will require various software and hardware upgrades and replacements of employee workstations. These costs are built into the detailed budget spreadsheet included in this application.

Software

As mentioned above, we are using ArcGIS servers to complete the data storage and mapping tasks associated with this broadband mapping program. Specifically, we intend to employ the following software applications to compete this task:

- ArcInfo 9.3.1 – Highest version of the ArcGIS desktop series with the most functionality. This is needed for high-level mapping and analysis.
- ArcEditor 9.3.1 – Next level of the ArcGIS desktop series. Less functionality but used for data verification and to ensure data quality.
- ESRI Developer Network – Gives access to scripts and other programming functions that can potentially be used for our online mapping application.
- SQL Server 2005 Enterprise – This is a database used to store spatial and non-spatial data used by ArcInfo, ArcEditor, and ArcGIS server.

The CPUC plans to use these software solutions because they are necessary tools to complete the GIS analysis that we intend to perform under this program. These programs integrate seamlessly with other ESRI products, such ArcGIS servers. Further, they are integral in performing the necessary verification and error correction functions that are required in the

NOFA's technical appendix. These software applications carry with them inherent licensing and upgrade costs that are accounted for in the detailed budget spreadsheet included in this application.

Personnel
As part of carrying out the requirements of this program, the CPUC will need to hire additional staff to carryout various data collection and analysis, processing, map creation, online mapping support, and reporting functions. These new positions include:

- Associate Information Systems Analyst (Specialist) - GIS Project Specialist. Will be responsible for GeoDatabase Administration and Development and GIS Applications Development (ArcGIS and ArcGIS Server). Will interface with Technology Services Unit (TSU), Application Development Unit, and Communications Division GIS Teams
- Research Program Specialist III (GIS) - Principal GIS lead for Broadband mapping project, involving Broadband data acquisition, data analysis, GeoDatabase development, and GIS applications development (web based, etc.). Interfaces internally in CPUC with ISB and manages GIS Team. Externally, interfaces with Broadband data providers and works cooperatively with other GIS professionals throughout the state of California to promote advanced digital mapping.
- Research Analyst II (GIS) - GIS Project Analyst: Responsible for QA/QC Broadband data and GIS data analysis. Interface with external broadband data providers.
- Grants Administrator - Responsible for the preparation, analysis, and submittal of reports and other information as per the federal guidelines and requirements. GA will maintain financial records and systems for federal accounting purposes, coordinate with internal and external resources, and communicate with appropriate State and Federal agencies.

The CPUC anticipates that the first three above listed positions will be imperative in accomplishing the additional GIS tasks necessary under this program that the CPUC cannot currently carry out with our existing hardware and software. These requirements will also be carried out by existing personnel, as listed above in the discussion on in-kind contribution. In addition to staff needed for GIS, there is need for a grants administrator to effectively coordinate, distribute, and track the funds associated with this grant program.

Miscellaneous Costs
The CPUC anticipates some miscellaneous costs associated with implementation of this program. These costs include the following:

- Consulting Services
- ESRI User Training
- Travel

Consulting services - The CPUC intends to employ the consulting services of the Geographical Information Center at California State University at Chico. In this role, the Chico team will verify availability of broadband at either the street and address level or at the census block level (as per the Broadband Mapping NOFA) based upon shapefiles and/or data submitted by service providers who submit information in support of the California State broadband mapping component of the National Broadband Map. Further, they will develop a broadband speed test and reporting tool that will measure broadband speeds to a specific and known server,

and develop an on-line digital mapping application that will identify the type of Internet service available, speeds available for that service, the service providers (where appropriate) and an address look-up function and the speed test function identified above. This application will also provide an area for capturing public comments regarding the speed and quality of service being provided by the local service provider and/or what is desired to be purchased, as identified by the user of the function. Data captured through this on-line application will be married with the survey data and reported to the CPUC as part of a complete broadband availability and verification report.

The CPUC believes that utilizing the expertise of this team is imperative in order to fully carry out the requirements of the NOFA. The cost associated with this consulting service is accounted for in the detailed budget spreadsheet included in this application.

ESRI Training - The CPUC intends to send members of staff to broadband mapping and general mapping training offered at the annual ESRI Users Conference held in San Diego. Travel costs for this conference and one admittance fee (other attendees will have their fees waived by ESRI) are accounted for in the detailed budget spreadsheet included in this application.

Travel - In addition to the costs that will inevitably be incurred as part of the undertaking of this program, the CPUC anticipates the need for face-to-face interaction with members of the NTIA and the FCC for the purposes of successfully carrying out the requirements set forth in the NOFA. This may include discussion regarding data collection, data usage, preferred verification methods, results, presentation of state-level map, and additional analysis performed by the CPUC. We have accounted for two trips per year for this purpose. Further, travel to Sacramento, Chico, and other locations will be necessary to interface with others regarding Parcel Map usage, data hosting, geocoding, and data verification. This is included in our detailed budget spreadsheet, included in this application.

Broadband Planning

For the purposes of the planning portion of this grant program, the CPUC intends to contract with the Geographical Information Center at California State University at Chico. In addition to their consulting role in our mapping initiatives, the Chico team will assist the CPUC in addressing the projects identified of Section 106(e) BDIA. The cost for this is explained in the Broadband Planning portion of our detailed budget spreadsheet included with this application. The Chico proposal includes the following:

Proposed CSU Chico Tasking in Support of CPUC's Federal Mapping Grant Application from NTIA

Provide the CPUC with demand side data and conduct specific outreach programs to facilitate the adoption and use of broadband services concentrating on areas where broadband penetration is significantly below the national average.

A. CSU, Chico will segment existing broadband demand studies and regions of the State of California into areas of low (0-40%, medium (41-59%, and high (60-100%) broadband adoption rates.

B. CSU, Chico will work with identified Internet service providers in areas of low and medium adoption regions to:

   1) Develop technology-neutral broadband awareness materials that can be distributed by the providers to promote broadband adoption. These materials can include, but are not limited to:

      i. White Papers
      ii. Articles
      iii. Reference Documents
      iv. Fact Sheets
      v. Provider Listings

   2) Work with local libraries and anchor institutions to provide local resources where residents can obtain un-biased awareness and outreach materials as well as conduct meetings, seminars and demonstrations on broadband uses and benefits.

   3) Work with and through the Inter-Tribal Council of California to promote broadband adoption opportunities to the Native American Tribes, communities, and Native American lands in California.

   4) Create a technology "Petting Zoo" to demonstrate broadband technology and hardware for use in conjunction with outreach meetings and events.

C. CSU, Chico (in its capacity as the Lead Small Business Development Center for Northeastern California) will work with the other regional Lead SBDC's and/or regional planning organizations to establish technology planning groups to:

   1) Benchmark technology groups across community and business sectors,
   2) Set goals for technology use within each sector, and
   3) Develop a tactical business plan for achieving the goals with specific recommendations for online application development and demand creation.

Deliverable: Quarterly reports to the CPUC identifying the process measures and goals put in place to promote broadband awareness and reporting progress associated with those measures and goals.

Pricing:

Year 1	Year 2	Year 3	Year 4	Year 5	Total
$150	$125	$125	$100	$0	$500

(c) Spreadsheet supporting how the budget request was calculated

Below is the summary page from our detailed budget spreadsheet that is attached to this application. This spreadsheet shows total costs, per year, for each of the budget categories for which funding is requested. A complete, specific spreadsheet, detailing all the individual hardware, software, personnel, and other needs that go into these totals are fully explained and disclosed in our detailed budget spreadsheet that is attached to the grant application, along with this narrative.

Subtotal Hardware and Software Costs	$457,401	$359,493	$239,361	$227,873	$133,385	$1,417,513
Personnel Costs	$212,297	$374,910	$374,910	$347,477	$347,477	$1,657,070
Miscellaneous Costs	$274,830	$164,830	$114,830	$94,830	$94,830	$744,150
GRAND TOTAL	$944,528	$899,233	$729,101	$670,180	$575,692	$3,818,733

Broadband Planning Budget	$150,000	$125,000	$125,000	$100,000	$0	$500,000

(d) Ability to secure the funding necessary to meet the required 20 percent non-federal matching contribution

As discussed above, the total In-Kind contribution for this grant program by the CPUC is $1,304,522. This amount more than satisfies the 20% non-federal matching requirement as set forth in the NOFA.

The brunt of the mandatory 20% non-federal matching funds will be derived from employee work hours dedicated to the process of fulfilling the requirements of this grant program. In order to ensure that the 20% is met, the CPUC will diligently track these employee hours using the CPUC Work Tracking System (WTS). WTS is a mandatory work tracking application that quantifies the amount of time spent on specific tasks at the employee, division, and commission wide level. Employees record actual work time in a WTS timesheet and submit that timesheet for supervisor approval. Each work item on the timesheet is identified and charged to the proper CPUC program and funding source. In addition, each monthly timesheet contains basic employee information including classification, salary, division, and branch. The system has a robust query module that allows authorized CPUC personnel to run reports based on program, work type, funding source, and many other criteria. These reports allow the CPUC to quantify both time and money spent on specific programs and funding sources at a very granular level. The CPUC plans to assign a new program, work items, and funding source code for the Broadband Mapping project for use in WTS. This will allow the CPUC to easily report staff time and dollars associated with this project.

In addition, the CPUC has worked closely with the GIO and other state entities to determine the value of various data sets, hardware, services, and 3rd party contributions that the CPUC intends to employ in carrying out the requirements of this program. These values are based on usability, functionality, original cost, and current value based on improvements made by the CPUC. These are detailed above in the In-Kind description.

2) Applicant Capacity, Knowledge and Experience

(a) Description of Applicant Qualifications

The CPUC is the expert agency for telecommunications and broadband issues in California. California has pursued a robust Broadband mapping effort during the past two years. This effort includes extensive mapping many mapping programs designed to identify, tract, and locate broadband service throughout the state. These programs include the work of the Task Force, mapping programs under DIVCA, and mapping in conjunction with CASF applications.

(b) Experience of Personnel
California employs several experts in the field of telecommunications, broadband-related data and GIS. These experts have extensive experience with collection, analysis, and mapping of broadband availability and subscribership data. Information regarding each of these experts is included below:

Michael Byrne, MA, GISP
Geographic Information Officer, Office of the State CIO

Michael Byrne is the Geospatial Information Officer for the State of California. He has 18 years of GIS experience in a wide variety of California state government and academia. Mr. Byrne has implemented GIS programs for the California Resources Agency, Department of Health Services, State Water Resources Control Board, State Fire Marshal, Department of Fish and Game, Department of Forestry and Fire Protection, and Department of Transportation. He has served as a GIS manager for the University of California Davis's Information Center for the Environment and as staff to the Secretary for Resources implementing special GIS projects. Apart from being a GIS technical expert, he has written several papers using GIS to affect policy decisions including the implementation of feasibility study reports, and state regulations. Michael holds a Bachelors of Science in Environmental Planning and a Masters of Art in Geography both from the University of California Davis.

Mr. Byrne was the architect and lead for the California Broadband Task Force's mapping effort (see http://calink.ca.gov/taskforce/appendix_maps.asp). This effort was the first statewide broadband mapping project to map broadband availability with the use of address level data. The California Broadband Task Force data provides the benchmark for broadband mapping in California.

EXPERIENCE
Office of the State CIO, Geographic Information Officer (03/2009 – Present)

Responsible for geospatial data development, coordination, and sharing statewide. Responsible for development of geospatial policy and standards implementation. Coordinating the California Spatial Data Infrastructure;

Department of Public Health, eServices Policy Manager (07/2008 – 03/2009)

Lead the management of all operational aspects of California Department of Public Health (CDPH) World Wide Web-based information technologies, services, and applications, including internet, intranet, and extranet.

Office of Statewide Health Pln. & Devel., Enterprise GIS Architect (01/2005 – 07/2008)

Principle project lead (management and technical architect) for implementing and maintaining the Enterprise Geographic Information Systems (EGIS) Project. Managed staff projects, contracts and technical implementation.

San Francisco State University, Adjunct Professor (10/2006 – Present)

Develop and instruct Extended College Course in visual tools for spatial analysis. Develop curricula and instruction as part of elective to the GIS Certificate program at San Francisco State University.

California Department of Transportation, GIS Project Lead (07/2004 – 12/2004)

Lead a team of 8 – 10 senior specialists in the requirements, business, and risk analysis of an enterprise www/GIS application for environmental decision making. Analyze feasibility for distributed GIS application.

California Resources Agency, Special Assistant to the Secretary for Resources (2/2003 – 07/2004)

Project Manager for California Digital Conservation Atlas; a www/GIS application. Managed internal and contract staff for the design and maintenance of complex GIS software implementations instituted for the Secretary.

UC Davis Information Center for the Environment, GIS Manager (03/2000 – 02/2003)

Managed a team of 10 – 12 journey and senior staff for the design, maintenance and implementation of www and GIS applications in support of watershed analysis. Set work priorities, develop timelines, and manage budgets.

CA State Fire Marshal, Pipeline Mapping Coordinator (09/1998 – 03/2000)

Lead responsible for implementation of geographic information system at the Hazardous Materials Safety Division. Independently interact with National Pipeline Mapping System, oil industry and public to implement GIS.

CA Department of Fish and Game, GIS Applications Development Specialist, (07/1995 – 08/1998)

Identify, develop and maintain fishery GIS data needs and applications for analysis. Set standards for fish data collection procedures and implement GIS functionality for fishery data. Develop tools for data automation.

CA Department of Forestry, Geographic Information Systems Analyst (04/1993 – 07/1995)

Responsible for cartographic design and GIS map production in Strategic Planning Program. Performed spatial analysis for map output. Aided in GIS modeling of population spread, fire behavior and timber harvest.

EDUCATION

- Masters of Arts. Geography, March 2003, University of California Davis
- Bachelor of Science. Environmental Biology & Management, December 1991, University of California Davis

PROFESSIONAL AFFILIATIONS

- National Geospatial Advisory Committee State Representative (2008)
- Board of Directors National States Geographic Information Council (since 2008)
- Chair California GIS Council (since 2006)
- Registry of Certified GIS Professionals (2006)
- Board of Directors GreenInfo Network (2006)

Michael A. Morris
Program & Project Supervisor, California Public Utilities Commission

Michael Morris is a graduate of the Communications Law Program at UCLA School of Law, and has previously worked in the FCC Chairman's Office, and in the cable television and competitive local phone industries. Previous employers have included the California Cable Television Association, where he was Vice President, Federal Affairs, Continental Cablevision, Teleport Communications Group, AT&T, Urban Media Communications Corporation, Allegiance Telecom and XO Communications

Mr. Morris joined the California Public Utilities Commission two years ago to head up the Video Franchising and Broadband Deployment group. His group leads the Commission's efforts to promote video and broadband competition per the requirements of AB 2987, the DIVCA. The "DIVCA Group" is engaged in all of the data gathering, analysis and mapping of broadband availability and subscribership for the state. Mr. Morris has supervised the Commission's updating of the Governor's Broadband Task Force (BBTF) availability maps, is currently supervising the Commission's Application for the State Broadband Data and Development Grant Program, as well as the Commission's activities pursuant to the receipt of a grant and its work under the BDIA.

EXPERIENCE

California Public Utilities Commission, Program & Project Supervisor (03/2007 – Present)

Responsible for franchising of video programmers in California, as well as collection, analysis and reporting of video and broadband availability and subscribership data. In addition, responsible for GIS mapping and analysis of broadband and video data, and visual presentation of these maps

American Chariot Co., Inc., Vice President, Law and Government Affairs, (01/2005 – 03/2007)

Responsibilities included corporate governance, contracting (including government sales and military funding) and local, federal and international regulatory issues for this start-up manufacturer of electric personal mobility devices for military, security and industrial sectors.

Allegiance Telecom Inc./XO Communications, Director, Industry & State Regulatory Affairs (06/2003 – 12/2004)

    Responsible for regional legislative and regulatory activity, in addition to dealings with interconnecting local exchange carriers, in the west for this nationwide competitive local phone company (CLEC) providing facilities-based telephone and internet services to small and medium sized businesses.

Urban Media Communications Corporation, Sr. Vice President, Legal, Regulatory & External Affairs & General Counsel (12/2000 –12/2001)

    Responsible for legal, regulatory and external affairs functions as this facilities-based competitive local phone company grew from 20 to 500 employees and raised $120 million in debt and equity. Managed the negotiation and drafting of more than a thousand real estate agreements to house telecom equipment and provide services to tenants of large office buildings, as well as dozens of complex hardware and software agreements. Responsible for legal preparations for public reporting and IPO.

AT&T, Division Manager, Law & Government Affairs (1999 – 2000)

    Represented AT&T in negotiations with local governments and in public meetings regarding approval of major cable television MSO acquisitions. Managed staff in charge of CPUC reporting and complaint resolution functions.

Teleport Communications Group, Regional VP, Regulatory & External Affairs (1993 – 1999)

    Responsible for legal, regulatory, government affairs and press functions in the western states for the nation's first competitive local telephone company as its regional revenue grew from $20 million to $300 million annually. Worked with state utility commissions and legislatures to establish the rules for local telecommunications competition, secured operating authority from state utility commissions and managed regulatory compliance requirements. Negotiated ILEC interconnection agreements (including the first approved in California under the Telecom Act of 1996) and enforced their provisions through negotiations, regulatory and legal actions. Lead industry efforts to create rules for collocation and competitively-neutral management of numbering resources.

Continental Cablevision, Corporate Counsel - Sierra Region (1989 – 1993)

    Responsible for the legal and government affairs of this region with $100 million in annual revenue, including the initial grant, renewal and management of cable franchises with more than 35 local government entities.

California Cable Television Association, Vice President, Federal Affairs (1983 – 1989)

    Represented the cable television industry before the California PUC, and lead the Association's dealings with the California Legislature regarding issues of competition between telephone and cable companies, in addition to heading up relationships and activities with Congress and the FCC.

Golden West Broadcasters, Radio Division Counsel (1982 – 1983)
   Responsible for regulatory and contract issues, including talent and syndicated programming agreements.

McCutchen, Black, Verleger & Shea, Associate (1979 – 1981)
   Antitrust and environmental litigation.

Intern, Office of the Chairman, Federal Communications Commission (1978)

EDUCATION

- Juris Doctor, University of California, Los Angeles School of Law
- Bachelor of Arts, Economics, Claremont Men's College, BA, *cum laude*
- Member, State Bar of California

Tito Vandermeyden,
Research Program Specialist II (GIS), California Public Utilities Commission

   Tito Vandermeyden is originally from the Netherlands. He received a Doctorandus Degree in Social Geography and GIS in 1994 from the University of Utrecht in the Netherlands. He has been in the GIS field for over 15 years, managing and implementing GIS. As a recent hire at the California Public Utilities Commission, Mr. Vandermeyden is the senior member of the GIS Team in the Video Franchising and Broadband Deployment group. He coordinates the collection, verification, analysis and mapping of broadband data including the DIVCA, CASF and ARRA projects. Previously, Mr. Vandermeyden also managed an international GIS Team for NextBus, Inc., located in the US (Alameda, CA) and Canada (Toronto). In these positions he developed, directed and implemented GIS division standards, staff assignments and project management. Mr. Vandermeyden has extensive experience in performing geographic research in various industries, academic settings and countries.

EXPERIENCE
California Public Utilities Commission, Research Program Specialist II (GIS), (02/2009 – Present)
   Responsible for complex research projects involving spatial analysis. Designing and testing complex spatial databases to provide data for departmental program operation, including DIVCA, CASF, and ARRA projects. Performing extensive policy analysis and working cooperatively with other GIS professionals throughout the state of California to promote advanced digital mapping and database management techniques.

San Francisco Police Department, Crime Analyst (08/2008 – 02/2009)
   Project Lead responsible for implementing Phase I of the SFPD Enterprise GIS. Includes implementation and maintenance of GIS web application and GIS development in support of crime analysis.

Nextbus Inc. (02/2003 – 07/2008)

GIS Manager
Managed an international GIS Team located in the US (Alameda, CA) and Canada (Toronto). Developed, directed and implemented GIS division standards, staff assignments and project management.

GIS Engineer
Responsible for designing, developing, and testing GIS application tools. Managed multiple new and continuing GIS projects. Provided consultative services for all accounts by continuously following up and monitoring customer needs.

LFR Levine-Fricke, Senior GIS Analyst (12/2001 – 11/2002)
Developed GIS applications in support of environmental management projects for municipal, federal and professional clients in the San Francisco Bay Area. Developed and maintained web portal that provided clients and project staff a place to archive documents, track project costs and access to GIS data. Responsible for cartographic design and GIS map production containing groundwater contamination plumes, geochemical concentration, contours and soil remediation data for environmental impact and site assessment reports.

San Francisco Chronicle, Market Research Analyst (05/2000 – 11/2001)
Identify, develop and maintain market research data needs and applications for analysis. Set standards for market research data collection procedures and implement GIS functionality for market research data. Developed tools for data automation.

Farallon Development Services, Research Analyst (06/1999 – 05/2000)
Managed a web based GIS system incorporating demographic and retail data, interactive maps and gravity modeling tools.

First Data Bank, Research Associate (05/1998 – 05/1999)
Maintained and managed pharmaceutical databases in various European languages.

ArcInfo Specialist, TeleAtlas (previously ETAK), Menlo Park CA (04/1996 – 03/1998)
Used ArcInfo (GIS Software) to perform spatial analysis and provided statistical reports supporting field staff in collecting GIS data for GPS-based automotive navigation systems.

EDUCATION
- Doctorandus (Drs.) Degree. Social Geography and GIS, September 1994, University of Utrecht, The Netherlands.
- Teaching Degree. Geography and History, December 1985, University of Amsterdam, The Netherlands

---

Dion Good
Research Analyst II (GIS), California Public Utilities Commission

Dion has worked on GIS mapping projects for the following telecommunications programs within the California Public Utilities Commission: Video Franchising and Broadband Deployment (VFBD), CASF, California High-Cost Fund B (CHCF-B), and Rural

Telecommunications Infrastructure (RTI). He also did GIS mapping for the California Tele-Health Network (CTN) and the CETF.

For each of these projects he acquired, integrated, developed, and managed GIS data from both public and private sources; created and maintained GIS metadata; produced high-quality finished maps for web publication. He was also involved in helping develop tentative Commission-wide GIS data standards; developing map templates for Video Franchise and Broadband Deployment; developing Alternate Geospatial Area calculation methods for state-franchised video providers. Dion is skilled in multiple GIS techniques, including geo-referencing and coordinate systems, geo-coding, geo-processing; data conversion, and cartographic production.

EXPERIENCE

California Public Utilities Commission, Research Analyst II (GIS) (2007-2009)
Conducted GIS analysis and mapping for telecommunications regulatory projects, including infrastructure and service area, broadband availability, and grant funding. Acquired, converted, and integrated source data from various agencies; developed GIS layers, managed spatial data, produced finished maps for web publication, trained staff.

Alameda County Registrar of Voters, Mapping Technician III (2007)
Planned, produced, and maintained digital precinct, district, and special use maps; conducted field work; helped develop an Enterprise GIS application; developed mapping templates, procedures, and specifications; trained staff.

American Land Conservancy, GIS Analyst (2006-2007)
Conducted GIS analysis and mapping in support of conservation projects. Acquired, converted, and integrated source data from various agencies; developed GIS layers; managed spatial data.

San Francisco Neighborhood Parks Council, GIS Specialist (2003-2006)
Conducted GIS analysis and mapping in support of park advocacy projects; acquired and integrated source data from various agencies; developed GIS layers, managed spatial data; developed interactive route maps for GIS mobile technology.

Lonely Planet Publications, Lead Guidebook Cartographer (1998-2002)
Produced and maintained large geo-referenced datasets for travel guide mapping; produced finished maps; coordinated the mapping effort on book projects; prepared author mapping briefs, map assessments, style sheets, book notes, and debriefing notes; provided accurate progress reports to management.

EDUCATION, TRAINING, AND CERTIFICATION
- Certified Geographic Information Systems Professional (GISP), GISCI (2008)
- Master of Arts in Geography, San Francisco State University (2006)
- Certificate in GIS, San Diego State University (1989)
- Bachelor of Arts in Geography, San Diego State University (1986)

Melissa Slawson, Esq.
Public Utilities Regulatory Analyst III, California Public Utilities Commission

Melissa Slawson is a licensed California Attorney who joined the CPUC after completing Law School. She has a background in telecommunications law which she uses to analyze state and federal legal policy affecting the State of California. This background includes work in a variety of topic areas including wireline and wireless issues, internet policy, broadcast ownership and decency rules, and spectrum issues. While at the CPUC she has been involved with a variety of work including policy related to the DIVCA program, potential VoIP regulations, and, most recently, drafting administrative comments on behalf of the CPUC for the NTIA's broadband mapping program and the FCC's National Mapping Plan. She is extremely knowledgeable in mapping policy matters and the law related to data collection from broadband and video providers in California.

EXPERIENCE

California Public Utilities Commission, Public Utilities Regulatory Analyst (02/2008 – present)

Analyzing legislation and policy related to the Broadband Technology Opportunities Program (BTOP), the Broadband Data Improvement Act, statewide video franchise licensing under the DIVCA, and other federal and state regulatory matters to facilitate the CPUC's goal of promoting the public interest. Composing decision drafts, resolutions, and internal memoranda regarding DIVCA, VoIP Universal Service contributions, ILEC Copper retirement, and consumer protection issues affecting California ratepayers. Researching Federal policy and drafting comments for the FCC and the NTIA related to BTOP and CPUC efforts to promote broadband deployment and broadband mapping efforts throughout underserved areas in California. Involved in ongoing communication with members of the FCC, California video franchise holders, and industry representatives.

Federal Communications Commission, Legal Intern - Office of Commissioner McDowell (01/2007–04/2007

Drafted internal memoranda regarding FCC administrative rule makings pertaining to Customer Proprietary Network Information, "white spaces," spectrum auctions, and media ownership rules. Researched legislative actions and trends for congressional oversight hearings. Participated in 'Ex Parte' communications with industry representatives.

National Association of Broadcasters, Law Clerk (Summer 2006)

Analyzed law and policy on major broadcasting issues including digital multicast carriage, media ownership, WCS spectrum regulations, and the effects of communications tower siting on migratory bird mortality as part of NAB's advocacy before the FCC. Drafted comments and reply documents for the FCC's Telephone Consumer Protection Act and Hurricane Katrina proceedings.

EDUCATION
- Juris Doctor, California Western School of Law, San Diego, CA, April 2007
- Visiting Student, Georgetown University Law Center, Washington, DC, Spring 2007 – Administrative Law

- Bachelor of Arts, *magna cum laude*, Psychology, University of Arizona, Tucson, AZ, May 2002
- State Bar of California, # 253371 (Active member)
- District of Columbia Bar, # 982654 (Inactive member)

Lily Chow
Public Utilities Regulatory Analyst II, California Public Utilities Commission

Lily Chow joined the California Public Utilities Commission as a Public Utilities Regulatory Analyst in the Communications Division in January 2008. Prior to that, she interned at the CPUC from June to December 2007. In her current position, she participates in the mapping efforts for the CASF and Broadband Technology Opportunities Program (BTOP) under the American Recovery and Reinvestment Act of 2009 (ARRA), where she is involved in mapping the proposed service areas of CASF applications and broadband availability data from the Task Force. As part of the Video Franchising and Broadband Deployment Group, she coordinates the collection of broadband and video data from state franchise holders under DIVCA and participates in the design of database schema with Information Services Branch staff to facilitate data storage and query. Using the FCC 477 broadband data submitted under DIVCA and household projections from the Census Bureau and state agencies, she conducts analysis on broadband penetration at the state, county, and census tract level, as well as by speed and technology type. Additionally, she completed a mapping project for the California Teleconnect Fund, where she geo-coded more than two thousand addresses of program-approved entities, including K-12 schools, hospitals, libraries, and nonprofit organizations.

Ms. Chow obtained her Master's degree in Public Administration from San Francisco State University in December of 2008. During her graduate studies, she completed two GIS mapping courses – Introduction to Geographic Information System and Advanced Geographic Information System in Vector Analysis. She holds a Bachelor of Art degree in Computer Science from University of California at Berkeley.

EXPERIENCE
California Public Utilities Commission, Public Utilities Regulatory Analyst II (01/2008 – Present)/ Graduate Student Intern (06/2007 – 01/2008)

Implement all aspects of video franchising law (DIVCA) including setting up administrative structures for user fees, drafting Decision and Resolutions, implementing annual data reporting requirements, creating application and reporting templates, setting up Oracle database for data storage and query. Prepare annual Legislative Report on broadband and video findings under DIVCA including written summary, quantitative graphs, and maps. Analyze quantitative data on broadband and video availability and adoption using GIS software and Excel. Research and identify reliable sources of household projections from state agencies and demographic data from Census to complete the analysis of broadband adoption. Create maps for California Advanced Services Fund/ARRA applications using GIS. Geo-coded approved entities for the California Teleconnect Fund and mapped demographic data with GIS. Analyzed and provided recommendation to DIVCA Phase II issues on data collection and build-out requirements.

LBJ School of Public Affairs, University of Texas at Austin, Policy Research Team Member (08/2005-05/2006)

Researched admission data to Texas flagship colleges, researched and downloaded socio-economic data from Census Bureau and national and state education agencies. Used GIS to map combined datasets and analyze results. Created database and user interface in Access to enable data storage and search.

EDUCATION

- Masters of Public Administration, December 2008, San Francisco State University
  - Relevant Courses:
    - Introduction to Geographic Information System
    - Geographic Information System in Vector Analysis (Advanced)
    - Research Methods and Data Analysis
    - Policy Analysis
- Bachelor of Art, Computer Science, Psychology, University of California Berkeley

---

Carolyn Lawson
Chief Information Officer (CIO), California Public Utilities Commission

Carolyn Lawson has been in leadership positions within the State of California for nearly 10 years. During this time, she has had project oversight and/or fiscal responsibility for some of the state's largest Information Technology (IT) projects. This includes overseeing the management of all IT assets, projects, data systems, infrastructure services and telecommunications. Further, she and her team are developing a CPUC Enterprise Architecture to rationalize, standardize, and consolidate IT infrastructure, data, and procedures for all departments within the CPUC encompassing the portfolio management of the all technology initiatives, operational oversight of IT functions, human resource management, and operations. CPUC Telecommunications related IT projects include the CASF and DIVCA.

EXPERIENCE

California Public Utilities Commission, Chief Information Officer (2/2008 through present)

Responsible for all IT infrastructure and support functions. This includes overseeing the management of all IT assets, projects, data systems, infrastructure services and telecommunications. Developing a CPUC Enterprise Architecture to rationalize, standardize, and consolidate IT infrastructure, data, and procedures for all departments within the CPUC. Telecommunications related IT projects include the CASF and DIVCA.

State and Consumer Services Agency, Deputy Director, eServices Office (11/2006-1/2008)

Responsible for statewide eServices. Created a statewide Web Masters User Group to provide information, strategic direction, data sharing. Managed several high visibility projects for the office of Governor Arnold Schwarzenegger including the SchoolFinder (www.schoolfinder.ca.gov) web site utilizing GIS location and performance data on

California schools to the public enhancing the transparence of the California educational system.

Health and Human Services Agency (7/2002-10/2006)
Department of Alcohol and Drug Programs (ADP), Assistant Deputy Director, Licensing and Certification Division
Strategic and operational management of the licensing functions of treatment programs funded by SAPT block grant. Managed a major reorganization to bring the Licensing and Certification Division into compliance with the governor's data sharing and transparency initiatives.

Office of Systems Integration, Transition Manager, Chief of Administration,
Transitioned $11 billion in primarily Social Services program related IT systems and projects from the control of the State Data Center to the direct control of the Health and Human Services Agency.

Department of Alcohol and Drug Programs (ADP), Deputy Chief Information Officer,
Under the leadership of the CIO, developed an award winning Project Management Office (PMO). The PMO became critical in providing project management services to IT and non-IT projects.

State and Consumer Services Agency, Operations Manager, Department of General Services (DGS), Office of Technology Resources (OTR), End User Support Services (EUSS) (2/2000-6/2002)
Managed a staff of 60 technical resources, providing support for 4,000 employees in several locations throughout California.

PROFESSIONAL AFFILIATIONS AND HONORS
- Project Pipeline, Board of Directors
- The Conference on California's Future, Board of Directors
- InformationWeek Magazine, Editorial Advisory Board
- Government Solutions - Innovation, Center for Digital Government, 2009
- Innovations in American Government, JFK School of Government, Harvard University, 2008 (Nominated)
- Best of California, Best Application Serving Multiple Jurisdictions - California Webtools, Center for Digital Government, 2007
- Dedication to Public Service, California State CIO, 2007

Raymund Flores
Associate Information Systems Analyst, California Public Utilities Commission

Mr. Flores administers the GIS Servers for the Broadband Mapping Program. In this role he creates geodatabases and regulates the necessary security needed for the server for access to the server by GIS analysts who utilize the geodatabase layers for various mapping needs. Ray

assists in the preparation of maps for CPUC broadband programs by performing GIS analysis on data and converting the results of such analysis to geodatabase layers. These layers are then rendered on maps or shapefiles used by CPUC analysts to promote and develop broadband policy throughout California. Further, he conducts needs assessments with GIS users where he evaluates their computer hardware and software needs and proposes recommended hardware and software solutions. He prepares the GIS budget and consults with both the Information Management Systems and the Communications Divisions to reconcile their specific needs with existing and proposed GIS server and IT network architecture. Additionally, Mr. Flores creates web-based mapping applications in ArcGIS Server using maps created by the CPUC's Communications Division.

EXPERIENCE

California Public Utilities Commission, Associate Information Systems Analyst (05/2008-Present)

As Geographic Information Systems (GIS) Applications Programmer lead project team in the needs assessment, requirements analysis, design, coding, testing, training, documentation, implementation, and maintenance of complex enterprise-level GIS and related database systems. Develop Web-based intranet and Internet mapping and related database applications using development tools and third party software (Oracle, ArcGIS ArcObjects VBA). Administer GIS Server—develop server-based basemaps, map documents, layers, geodatabases and shapefiles for GIS client-server and Web-based users, regulate user access to GIS server maps, map layers and other data stored in geodatabases, shapefiles and other formats, maintain and update GIS server software, including version control, licensing and extensions that provide for additional user functionality. Design and generate data templates and reports for map documents and layers, geodatabases and shapefiles for GIS data requestors.

State Compensation Insurance Fund, (09/1995-05/2008)

Associate Information Systems Analyst (01/2003-05/2008)

As Applications Consultant led business team in developing and implementing the Oracle Human Resources (HR) Intelligence System project by facilitating and leading regular team meetings and focus groups to gather business requirements, developed project plans and tracked progress using Microsoft Project software, led stress testing of HR Intelligence test instance and developed a training program for select power users of the HR Intelligence module, with this experience became HR business lead for the Executive Decision Support System (EDSS).

Associate Information Systems Analyst, 09/1995-12/2002

As Loss Control (LC) Systems Specialist, planned, designed, developed, coded, tested and deployed computer applications used by SCIF's District LC Representatives and the Safety and Health Services (SHS) Department staff using Microsoft Access Visual Basic for Applications (VBA) and Visual Basic 6.0. As Webmaster for SCIF Safety & Health Intranet website planned, developed and updated Web content, using Microsoft Front Page and HTML editors. Evaluated third-party vendor software, hardware or systems requests for

proposal for loss control function applicability and existing systems compatibility, recommended for or against acquisition.

EDUCATION

- BA Social Sciences, University of California, Berkeley, 1987.
- MA Social Sciences (in progress), San Francisco State University, 1989-1990.
- Certificate in Geographic Information Systems, City College of San Francisco, 2009.

C) Expedient Data Delivery

1) Timeline for major project goals, including anticipated dates of data delivery

As a first step, the CPUC intends to spend the first two month after submitting this application securing Non-Disclosure Agreements (NDAs) with the individual providers serving customers within California and informing broadband providers in California of the need to submit data. These NDAs will establish with these providers that any data submitted to the CPUC under this program will be afforded confidentially pursuant to the requirements of the NOFA, BDIA and California statutes. Once these NDAs are completed, the CPUC anticipates collecting, processing, and delivering to the NTIA broadband provider a substantially complete set of data by February 1, 2010. We further anticipate delivering a complete set of the data collected under this program by March 1, 2010. As discussed above, the CPUC intends to send out a Data Request by the end of August, 2009 requesting broadband providers operating within the state of California to collect and remit the data required by the NOFA to the CPUC no later than Sept 30, 2009. The Data Request designed specifically to collect data required by the technical appendix by asking for it directly from the service providers in the format of the technical appendix. This will avoid unnecessary data processing to ensure data is collected in the proper format. With the data submitted to us by these providers, we intend to deliver error corrected and verified data to the NTIA in a timely manner. To the extent possible, these data will be provided by November 1, 2009.

In addition to delivering any processed broadband provider data available, the CPUC also intends to provide the NTIA with the following on November 1, 2009:
1. Updated Task Force broadband availability map and associated shapefiles
2. Broadband availability map derived from the data collected under DIVCA and associated shapefiles
3. Maps of broadband subscribership, predominant speed tiers, and predominant technology types derived from Form 477 data filed by state video franchise holders and associated shapefiles
4. Map of approved projects under the CPUC's CASF program and associated shapefiles

We intend to deliver a substantially complete set of data by February 1, 2010 and to deliver a complete set of data by March 1, 2010. Upon receipt of data from broadband providers, we anticipate that it will take approximately 90 days to error correct, verify, and geocode the data.

The process for this is discussed in more detail above. This data set will then promptly be sent to the NTIA in the requisite form as set forth in the Technical Appendix of the NOFA.

2) Ability to Complete the Project Requirements within the Proposed Timeline

The CPUC was selected as the designated entity for California under this program because of our expertise in the field of broadband data collection and mapping, existing expert personnel, and knowledge of the equipment necessary to carry out the requirements set forth in the Technical Appendix. Extensive planning to undertake these requirements is already underway. We believe that our detailed budget, included in this application, our understanding of the agreements and partnerships necessary to undertake the ambitious goals we have set for ourselves utilizing the grant funding requested herein, and our highly trained and skilled GIS staff give us the ability to complete the project requirements of this grant program in accordance with the timeline discussed above. The CPUC fully anticipates being able to complete all duties set forth by this program in addition to the state-level mapping efforts that we intend to undertake using the data submitted to us under this program well within the timeframes set forth by the NOFA.

D) Process for Repeated Data Updating

The CPUC plans to employ the same efforts discussed above necessary for the first round of data submitted by service providers for every data submission cycle under this program. Every 6 months, the CPUC will send out Data Requests to each identified broadband service provider serving customers within the state of California requesting the data required under the Technical Appendix of the NOFA. This process will also include any drafting or renewal of NDAs, as necessary. Next the CPUC will engage in the same error correcting, geocoding, and verification of data as we describe above. We believe that this process is a sound model for the first round of data submission, as well as all subsequent rounds. We intend to update the process as necessary to account for any changes in the market, technology, or this grant program.

E) Planning and Collaboration

The Office of the State Chief Information Officer (OCIO) houses the Geographic Information officer (GIO). The GIO is a member of the CPUC's project team, and his role is collaborating with and developing partnerships between state agencies. It is the intent of this application to significantly partner with existing agencies where data, infrastructure and/or people which exist in other state agencies can be leveraged to meet the broadband mapping goals. In most cases, the OCIO/GIO already has working relationship, or Memorandum of Understanding, with these agencies. Additionally, the GIO is the Chair of the California GIS Council, which governs GIS efforts in the state. The GIO will help ensure the working relationships and collaborative partnerships are in place for the benefit of this grant. The additional state agencies to be included for support in any category (e.g. data, technology, people etc) are:
- The California Natural Resources Agency (CalAtlas)
- The California Department of Education
- The California State Library

- The California Department of Mental Health
- The OCIO Public Safety Communications Division
- The California State University System
- The California Postsecondary Education Commission
- The California Department of General Services
- The California Secretary of State
- The California Department of Corporations
- The California Employment Development Department
- The California Board of Equalization

In addition many non-government entities exist which could also provide support. The CPUC, as the applicant, has the responsibility of forming partnerships with the following entities and intends to do so before we begin processing the data collected from service providers:
- Association of Rural Counties
- Corporation for Education Network Initiatives in California
- California Emerging Technology Fund
- Local authorities
- California State University, Chico

In the case of state government partnerships that will be providing data, no formal agreements are required as government to government data sharing in California is mature. Interagency Agreements between the CPUC, CalAtlas and CSU Chico, with the requisite confidentiality requirements and other federal requirements required by the NOFA will be established.

IV) Conclusion
For the forgoing reasons, the CPUC, as the designated entity for the State of California, submits this grant proposal.

Broadband Planning Budget Narrative

In Year One (1) of this project it is anticipated that there will be substantial direct involvement by both the Assistant Director of the Center for Economic Development (25%) as well as the Project Manager (95%). In addition the services of an Event Coordinator (20%) will be invaluable for scheduling and arranging for meetings and meeting locations. Student research assistants will be used to gather and quantify pertinent broadband adoption data. Additionally, much of the initial promotional material used to sell the concept of Broadband and promoting the features and benefits of broadband will be written (by consultants and staff) and distributed. Travel costs will be incurred in order to set up initial Planning Group meetings and coordinating the establishment of benchmarks and goals. Travel is also anticipated for direct personal visits to various anchor institutions and to Native American communities. Hardware costs will be the minimal amounts needed to support the demonstration hardware needed for community outreach meetings.

Years Two (2) and Three (3) see a slight decline in the direct involvement of the Assistant Director (20%) and the Project Manager (85%), however the remainder of the personnel costs will remain the same. Because the majority of collateral material will have been developed in the first year, the need for direct management of consultants Consultant costs will drop substantially in years two and three as the bulk of the promotional material will have been written. Some consultant time remains to account for updates and changes to previously development material. Travel costs also are anticipated to drop as Planning Group meetings will become self sustaining activities without the ongoing need for constant and direct supervision. Additionally, the use of webinars and video conferencing will offset some of the travel costs as well.

Year Four (4) sees a further decline in the direct involvement of the Assistant Director (10%) and some reduced hours on the part of the Project Manager (75%). Most of the Project Managers time will be devoted to wrapping up and documenting the results of the various outreach efforts as well as the results of the regional Planning Group efforts. Additionally, there will be fewer events to coordinate in the last year of operations so this lowered expectation is reflected in the lowered estimate for event coordination management and student research costs. There will be minimal consultant costs and reduced other direct costs as well.

As is shown above, the majority of the work on this effort will be managed, coordinated and performed by the Project Manager assisted by an Event Coordinator and Student Research Assistants for support. The role of the Assistant Director is to coordinate with the other Lead SBDC organizations and to provide oversight and management coordination with other efforts at the CSU, Chico Research Foundation (e.g. the Geographical Information Center) and the CPUC.

Projected Budget Costs 2009-2010 (Year 1)

Personnel

Salaries and Wages

Assistant Director	15,750	
Project Manager	42,750	
Researcher	760	
Administrative Manager	2,393	
Event Coordinator	6,883	
Economist	1,167	
Research Assistants	6,240	
Total Salaries and Wage		75,943

Fringe Benefits

Assistant Director	5,043	
Project Manager	16,074	
Researcher	362	
Administrative Manager	998	
Event Coordinator	3,142	
Economist	122	
Research Assistants	652	
Total Fringe Benefits		26,393

Total Personnel Expenses

		102,335

Consultant

Various		10,000

Operating Expenses

Supplies	633	
Travel	4,000	
Hardware	2,000	
Software	1,500	
Duplication	500	
Total		8,633

Total Direct Costs

		120,968

Foundation &Administrative Costs (Applied by CSU, Chico Research Foundation for State Contracts)

@ 24%		29,032

Total Project

		150,000

Projected Budget Costs 2010-2011 (Year 2)

Personnel

Salaries and Wages

Assistant Director	12,600	
Project Manager	38,250	
Researcher	760	
Administrative Manager	2,393	
Event Coordinator	6,883	
Economist	1,167	
Research Assistants	6,240	
Total Salaries and Wage		68,293

Fringe Benefits

Assistant Director	4,035	
Project Manager	14,382	
Researcher	362	
Administrative Manager	998	
Event Coordinator	3,142	
Economist	122	
Research Assistants	652	
Total Fringe Benefits		23,692

Total Personnel Expenses

		91,985

Consultant

Various		2,700

Operating Expenses

Supplies	622	
Travel	2,000	
Hardware	2,000	
Software	1,000	
Duplication	500	
Total		6,122

Total Direct Costs

		100,807

Foundation &Administrative Costs (Applied by CSU, Chico Research Foundation for State Contracts)

@ 24%		24,194

Total Project

		125,000

10

Projected Budget Costs 2011-2012 (Year 3)

Personnel

Salaries and Wages

Assistant Director	12,600	
Project Manager	38,250	
Researcher	760	
Administrative Manager	2,393	
Event Coordinator	6,883	
Economist	1,167	
Research Assistants	6,240	
Total Salaries and Wage		68,293

Fringe Benefits

Assistant Director	4,035	
Project Manager	14,382	
Researcher	362	
Administrative Manager	998	
Event Coordinator	3,142	
Economist	122	
Research Assistants	652	
Total Fringe Benefits		23,692

Total Personnel Expenses

		91,985

Consultant

Various		2,700

Operating Expenses

Supplies	622	
Travel	2,000	
Hardware	2,000	
Software	1,000	
Duplication	500	
Total		6,122

Total Direct Costs

		100,807

Foundation &Administrative Costs (Applied by CSU, Chico Research Foundation for State Contracts)

@ 24%		24,194

Total Project

		125,000

Projected Budget Costs 2012-2013 (Year 4)

Personnel

Salaries and Wages

Assistant Director	6,300	
Project Manager	33,750	
Researcher	760	
Administrative Manager	2,393	
Event Coordinator	5,162	
Economist	1,167	
Research Assistants	5,304	
Total Salaries and Wage		54,836

Fringe Benefits

Assistant Director	2,017	
Project Manager	12,690	
Researcher	362	
Administrative Manager	998	
Event Coordinator	2,356	
Economist	122	
Research Assistants	554	
Total Fringe Benefits		19.099

Total Personnel Expenses

		73,935

Consultant

Various		1,000

Operating Expenses

Supplies	610	
Travel	2,100	
Hardware	2,000	
Software	500	
Duplication	500	
Total		5,710

Total Direct Costs

		80,645

Foundation &Administrative Costs (Applied by CSU, Chico Research Foundation for State Contracts)

@ 24%		19,355

Total Project

		100,000

Hardware Costs	$202,512.00	$275,024.00	$189,536.00	$178,048.00	$83,560.00	$928,680.00
Software Costs	$254,889.00	$84,469.00	$49,825.00	$49,825.00	$49,825.00	$488,833.00
Subtotal Hardware and Software Costs	$457,401	$359,493	$239,361	$227,873	$133,385	$1,417,513
Personnel Costs	$212,297	$374,910	$374,910	$347,477	$347,477	$1,657,070
Miscellaneous Costs	$274,830	$164,830	$114,830	$94,830	$94,830	$744,150
GRAND TOTAL	$944,528	$899,233	$729,101	$670,180	$575,692	$3,818,733

Broadband Planning Budget	$150,000	$125,000	$125,000	$100,000	$0	$500,000

Quantity	Annual Direct Cost	Description	Comments	Amount	Subtotals
			Hardware Costs:		
1	$11,000.00	ArcGIS 9.3.1 Enterprise GIS Server Maintenance	Annual Hardware & Software maintenance cost for GIS Server 1 (SOC/SOM/DB)	$11,000.00	$11,000.00
1	$30,000.00	GIS Server 2 (SOC/SOM/DB)	Second Internal GIS Server exclusively for Broadband Mapping Applications	$30,000.00	$30,000.00
1	$95,000.00	Backup Solution for GIS Server 2 (SOM/SOC/DB)	Backup solution offsite, data streaming, backup management with updates and replicated SAN storage	$95,000.00	$95,000.00
1	$512.00	Data OffSite Storage	Cost of Data Offsite Storage for GIS Server 2 at $ 512/Terrabyte	$512.00	$512.00
1	$50,000.00	GIS Data/Web Applications Outside Hosting	CERES/CalAtlas--Public side of the GIS Broadband Mapping Application (includes hosting, map rendering and tech support)	$50,000.00	$50,000.00
6	$500.00	GIS Workstation Upgrades	To cover hardware and software upgrades to existing workstations	$3,000.00	$3,000.00
1	$13,000.00	GIS Mobile Workstation	Notebook PC including ArcInfo software for Offsite GIS Data Collection, Analysis and Presentations	$13,000.00	$13,000.00
		Subtotal for Hardware Costs			$202,512.00

Quantity	Annual Direct Cost	Description	Comments	Amount	Subtotals
			Software Costs:		
2	$3,300.00	ArcInfo 9.3.1 Concurrent License Maintenance	Annual license maintenance cost	$6,600.00	$6,600.00
1	$8,415.00	ArcInfo 9.3.1 Concurrent License	Annual license cost (new)	$8,415.00	$8,415.00
3	$5,950.00	ArcEditor 9.3.1 Concurrent License	Annual license cost (new)	$17,850.00	$17,850.00
6	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	Data Interoperability Extension	$12,240.00	$12,240.00
6	$2,040.00		3D Analyst Extension	$12,240.00	$12,240.00
6	$2,040.00		Spatial Analyst Extension	$12,240.00	$12,240.00
6	$2,040.00		Survey Analyst Extension	$12,240.00	$12,240.00
6	$2,040.00		Geostatistical Analyst Extension	$12,240.00	$12,240.00
1	$6,372.00		PLTS Foundation Concurrent Use	$6,372.00	$6,372.00
1	$2,040.00		JTX Desktop Concurrent Use	$2,040.00	$2,040.00
2	$1,500.00	ESRI Developer Network Subscriptions	For developing scripts and programming mapping applications.	$3,000.00	$3,000.00
1	$15,000.00	SQL Server 2005 Enterprise License	Server plus 15 CAL pricing for GIS Server 1	$15,000.00	$15,000.00
1	$17,090.00	ESRI Data	ESRI Demographic Data, TeleAtlas Telecommunications Data	$17,090.00	$17,090.00
1	$16,322.00	ArcGIS Server 9.3.1 Enterprise Advance Staging Server License	For GIS Server 2	$16,322.00	
4	$25,000.00	SQL Server 2005 Enterprise License	Per processor licensing for GIS Server 2	$100,000.00	
1	$1,000.00	Windows 2003/2008 Server License	For GIS Server 2	$1,000.00	
					$117,322.00
		Subtotal for Software Costs			**$254,889.00**

Quantity	Annual Direct Cost	Description	Comments	Amount	Subtotals
			Personnel Costs:		
1	$100,294.00	Associate Information Systems Analyst (Specialist)	Principal GIS Project Specialist (ISB): Responsible for GeoDatabase administration and development, GIS applications development (ArcGIS and ArcGIS Server). Interface with Technology Services Unit (TSU), Application Development Unit, and Communications Division GIS Team (EXISTING).	$75,220.50	$75,220.50
1	$85,180.00	Associate Information Systems Analyst (Specialist)	GIS Project Specialist (ISB): Responsible for GeoDatabase administration and development, GIS applications development (ArcGIS and ArcGIS Server). Interface with Technology Services Unit (TSU), Application Development Unit, and Communications Division GIS Team (NEW POSITION).	$63,885.00	$63,885.00
0.75	$104,506.00	Research Program Specialist II (GIS)	Principal GIS lead for Broadband mapping project, involving Broadband data acquisition, data analysis, GeoDatabase development, GIS applications development (web based, etc.). Interfaces internally in CPUC with ISB and manages GIS Team. Externally Interfaces with Broadband data providers and works cooperatively with other GIS professionals throughout the state of California to promote advanced digital mapping (EXISTING).	$58,784.63	$58,784.63
0.3	$64,032.00	Grants Administrator	Responsible for the preparation, analysis, and submittal of reports and other information as per the federal guidelines and requirements. GA will maintain financial records and systems for federal accounting purposes, coordinate with internal and external resources, and communicate with appropriate State and Federal agencies (NEW PART-TIME POSITION).	$14,407.20	$14,407.20
			Subtotal for Personnel Costs		**$212,297.33**

Quantity	Annual Direct Cost	Description	Comments	Amount	Subtotals
			Miscellaneous Costs:		
1	$250,000.00	Consulting Services	GIS Consulting Services from Geographical Information Center at California State Unversity at Chico	$250,000.00	$250,000.00
12	$1,500.00	ESRI User Training	ESRI Training: San Diego (includes travel)	$18,000.00	$18,000.00
2	$3,415.00	Travel	Travel cost for 3 members of CPUC staff related to this program	$6,830.00	$6,830.00
		Subtotal for Miscellaneous Costs:			$274,830.00

Quantity	Annual Direct Cost	Description	Comments	Amount	Subtotals
			Hardware Costs:		
2	$11,000.00	ArcGIS 9.3.1 Enterprise GIS Server Maintenance	Annual Hardware & Software maintenance cost for GIS Servers 1 and 2 (SOM/SOC/DB)	$22,000.00	$22,000.00
1	$18,000.00	GIS Server 3	ArcGIS Server for Public (Internet) Applications	$18,000.00	
1	$11,000.00		Annual maintenance cost for GIS Server 3	$11,000.00	
					$29,000.00
1	$18,000.00	GIS Server 4	Second ArcGIS Server for Public (Internet) Applications	$18,000.00	
1	$11,000.00		Annual maintenance cost for GIS Server 4	$11,000.00	
					$29,000.00
1	$95,000.00	Backup Solution for GIS Server 3	Backup solution offsite, data streaming, backup management with updates and replicated SAN storage	$95,000.00	$95,000.00
2	$2,000.00	GIS SOC Maintenance (GIS Servers 1 and 2)	Annual hardware and software maintenance cost for for the SOC portions of GIS Servers 1 and 2	$4,000.00	$4,000.00
1	$16,000.00	GIS SOC Only Server 1	Server Object Container (SOC) ArcGIS Server for Public GIS applications	$16,000.00	$16,000.00
7	$1,000.00	GIS Workstation Replacements	Cost is calculated for replacement of 7 workstations to accomodate ArcGIS Desktop Products	$7,000.00	$7,000.00
1	$50,000.00	GIS Data/Web Applications Outside Hosting	CERES/CalAtlas--Public side of the GIS Broadband Mapping Application (includes hosting, map rendering and tech support)	$50,000.00	$50,000.00
1	$2,000.00	Backup Solution for GIS SOC 2/DB Server (Maintenance)	Barracuda Backup Solution for off-site, data streaming backup management with updates	$2,000.00	$2,000.00
1	$20,000.00	Network Upgrade Cost	Bandwidth expansion for new servers	$20,000.00	$20,000.00
1	$1,024.00		Cost of Data OffSite Storage $ 50/100GB About 1TB/yr 1024@ 512/TB	$1,024.00	$1,024.00

Quantity	Annual Direct Cost	Description	Comments	Amount	Subtotals
		Subtotal for Hardware Costs			$275,024.00
			Software Costs:		
3	$3,300.00	ArcInfo 9.3.1 Concurrent License Maintenance	Annual license maintenance cost	$9,900.00	$9,900.00
3	$1,000.00	ArcEditor 9.3.1 Concurrent License Maintenance	Annual license maintenance cost	$3,000.00	$3,000.00
2	$1,500.00	ESRI Developer Network Subscriptions	For developing scripts and programming mapping applications.	$3,000.00	$3,000.00
1	$13,925.00	ESRI Data	ESRI Demographic Data, TeleAtlas Telecommunications Data	$13,925.00	$13,925.00
1	$1,000.00	Windows 2003/2008 Server License	For GIS Server 3	$1,000.00	$1,000.00
1	$16,322.00	ArcGIS Server 9.3.1 Enterprise Advance Staging Server License	For GIS Server 3	$16,322.00	$16,322.00
1	$1,000.00	Windows 2003/2008 Server License	For GIS Server 4	$1,000.00	$1,000.00
1	$16,322.00	ArcGIS Server 9.3.1 Enterprise Advance Staging Server License	For GIS Server 4	$16,322.00	$16,322.00
1	$20,000.00	Parcel Mapping Data	To be paid to the office of the State CIO for maintenance costs	$20,000.00	$20,000.00

Quantity	Annual Direct Cost	Description	Comments	Amount	Subtotals
		Subtotal for Software Costs:			**$84,469.00**
			Personnel Costs:		
1	$105,309.00	Staff Information Systems Analyst (Specialist)	Principal GIS Project Specialist (ISB): Responsible for GeoDatabase administration and development, GIS applications development (ArcGIS and ArcGIS Server). Interface with Technology Services Unit (TSU), Application Development Unit, and Communications Division GIS Team (CARRY OVER FROM PREVIOUS YEAR)	$105,309.00	$105,309.00
1	$85,180.00	Associate Information Systems Analyst (Specialist)	GIS Project Specialist (ISB): Responsible for GeoDatabase administration and development, GIS applications development (ArcGIS and ArcGIS Server). Interface with Technology Services Unit (TSU), Application Development Unit, and Communications Division GIS Team (CARRY OVER FROM PREVIOUS YEAR)	$85,180.00	$85,180.00
0.75	$109,732.00	Research Program Specialist III (GIS)	Principal GIS lead for Broadband mapping project, involving Broadband data acquisition, data analysis, GeoDatabase development, GIS applications development (web based, etc.). Interfaces internally in CPUC with ISB and manages GIS Team. Externally Interfaces with Broadband data providers and works cooperatively with other GIS professionals throughout the state of California to promote advanced digital mapping (NEW POSITION).	$82,299.00	$82,299.00
1	$82,912.00	Research Analyst II (GIS)	GIS Project Analyst: Responsible for QA/QC Broadband data and GIS data analysis. Interface with external broadband data providers (CARRY OVER FROM PREVIOUS YEAR).	$82,912.00	$82,912.00
0.3	$64,032.00	Grants Administrator	Responsible for the preparation, analysis, and submittal of reports and other information as per the federal guidelines and requirements. GA will maintain financial records and systems for federal accounting purposes, coordinate with internal and external resources, and communicate with appropriate State and Federal agencies.(CARRY OVER FROM PREVIOUS YEAR)	$19,209.60	$19,209.60
			Subtotal for Personnel Costs:		**$374,909.60**
			Miscellaneous Costs:		
1	$140,000.00	Consulting Services	GIS Consulting Services from Geographical Information Center at California State Unversity at Chico	$140,000.00	$140,000.00
12	$1,500.00	ESRI User Training	ESRI Training: San Diego (includes travel)	$18,000.00	$18,000.00
2	$3,415.00	Travel	Travel cost for 3 members of CPUC staff related to this program	$6,830.00	$6,830.00
			Subtotal for Miscellaneous Costs:		**$164,830.00**

Quantity	Annual Direct Cost	Description	Comments	Amount	Subtotals
			Hardware Costs:		
4	$11,000.00	ArcGIS 9.3.1 Enterprise GIS Server Maintenance	Annual Hardware & Software maintenance cost for GIS Servers 1, 2, 3 and 4	$44,000.00	$44,000.00
3	$2,000.00	GIS SOC Maintenance	Annual hardware and software maintenance cost for SOC portion of GIS Servers 1 and 2 and GIS SOC Only Server 1	$6,000.00	$6,000.00
1	$16,000.00	GIS SOC Only Server 2	Server Object Container for the Second ArcGIS server for Public Applications	$16,000.00	$16,000.00
7	$1,000.00	GIS Workstation Replacements	Cost is calculated for replacement of 7 workstations to accomodate ArcGIS Desktop Products	$7,000.00	$7,000.00
1	$95,000.00	Backup Solution for GIS SOC Only Server 2	Barracuda Backup Solution for off-site, data streaming backup management with updates and Replicated SAN storage	$95,000.00	$95,000.00
1	$20,000.00	Network Upgrade Cost	Bandwidth expansion for new servers	$20,000.00	$20,000.00
1	$1,536.00		Cost of Data OffSite Storage $ 50/100GB About 1TB/yr 1024@ 512/TB	$1,536.00	$1,536.00

Quantity	Annual Direct Cost	Description	Comments	Amount	Subtotals
			Software Costs:		
3	$3,300.00	ArcInfo 9.3 Concurrent License Maintenance	Annual license maintenance cost	$9,900.00	$9,900.00
3	$1,000.00	ArcEditor 9.3 Concurrent License Maintenance	Annual license maintenance cost	$3,000.00	$3,000.00
2	$1,500.00	ESRI Developer Network Subscriptions	For developing scripts and programming mapping applications.	$3,000.00	$3,000.00
1	$20,000.00	Parcel Mapping Data	To be paid to the office of the State CIO for maintenance costs	$20,000.00	$20,000.00
1	$13,925.00	ESRI Data	ESRI Demographic Data, TeleAtlas Telecommunications Data	$13,925.00	$13,925.00

Quantity	Cost	Description	Comments	Amount	Subtotals
Hardware Costs:					
Software Costs:					
Personnel Costs:					
0.5	$82,725.00	Public Utilities Regulatory Analyst II	GIS Project Analyst: Responsible for QA/QC Broadband data and GIS data analysis. Interface with external broadband data providers (EXISTING).	$41,362.50	$41,362.50
0.2	$90,882.00	Public Utilities Regulatory Analyst III	Responsible for legal policy analysis for CPUC regulatory actions (EXISTING)	$18,176.40	$18,176.40
0.5	$145,306.00	Project and Program Supervisor, PUC	Supervising, coordinating entire Broadband Mapping project. Interfacing with vendors and Broadband providers. Supervising staff (EXISTING)	$72,653.00	$72,653.00
0.05	$172,947.00	Commissioner, PUC	Main Project Sponsor. (EXISTING)	$8,647.35	$8,647.35
0.05	$146,367.00	CEA III (State Geospatial Information Officer)	Consulting on Parcel Map and Elevation Layers (EXISTING)	$7,318.35	$7,318.35
		Subtotal for Personnel Costs			$148,157.60
Miscellaneous Costs:					
1	$10,000.00	CalAtlas Geocoding	Value of geocoding preformed by CalAtlas	$10,000.00	$10,000.00
		Subtotal for Miscellaneous Costs			$10,000.00

Quantity	Cost	Description	Comments	Amount	Subtotals
			Hardware Costs:		
			Software Costs:		
			Personnel Costs:		
0.5	$82,725.00	Public Utilities Regulatory Analyst II	GIS Project Analyst: Responsible for QA/QC Broadband data and GIS data analysis. Interface with external broadband data providers (EXISTING).	$41,362.50	$41,362.50
0.2	$90,882.00	Public Utilities Regulatory Analyst III	Responsible for legal policy analysis for CPUC regulatory actions (EXISTING)	$18,176.40	$18,176.40
0.5	$145,306.00	Project and Program Supervisor, PUC	Supervising, coordinating entire Broadband Mapping project. Interfacing with vendors and Broadband providers. Supervising staff (EXISTING)	$72,653.00	$72,653.00
0.05	$172,947.00	Commissioner, PUC	Main Project Sponsor. (EXISTING)	$8,647.35	$8,647.35
0.05	$146,367.00	CEA III (State Geospatial Information Officer)	Consulting on Parcel Map and Elevation Layers (EXISTING)	$7,318.35	$7,318.35
		Subtotal for Personnel Costs			**$148,157.60**
			Miscellaneous Costs:		
1	$10,000.00	CalAtlas Geocoding	Value of geocoding preformed by CalAtlas	$10,000.00	$10,000.00
		Subtotal for Miscellaneous Costs			**$10,000.00**

1.   Address-Level or Census Block: Please clarify whether you are
planning to request data at the address or census block/street segment level.
If you are requesting data at the address level, please explain your
anticipated action(s) if providers are unwilling to provide data at the
address level?

As discussed in our grant application narrative, the CPUC sent out a Data
Request on September 1, 2009 to all licensed and unlicensed broadband service
providers that could be identified in California. This Request seeks data at
the census block/street segment level, but gives them the option to provide
data in the original address-specific format. The CPUC provided this option
for providers who do not wish, or do not have the know-how, to provide census
block/street segment data, since that method requires the provider to match
each address they serve with a census block, to determine whether that block
is larger than two square miles and, if so, to look up and report to us the
street segment address ranges associated with the each such address.
Attached is a copy of this Request and record formats we communicated.

2.   Indian Tribes/Tribal Governments: Please describe your planned
outreach to Indian tribes to ensure that these groups are involved in the
process and that you will receive information about broadband availability on
these lands.

As discussed in #1 above, the CPUC sent a Data Request to every licensed and
unlicensed broadband service provider (both wireline and wireless) that could
be identified within the state. We believe that if any of these providers
are offering service to Indian lands, we will receive information about it in
response to this Request.

In addition, as part of the verification process, our consultant, CSU Chico
will specifically verify the availability of broadband services on tribal
lands through contacts within Native American groups in California, such as
the Inter-Tribal Council of California, and others.

Finally, as part of the Broadband Planning portion of the CPUC's grant
application, the CPUC has enlisted the help of a team at CSU, Chico to
work with identified Internet service providers in areas of low and medium
adoption regions to "Work with and through the Inter-Tribal Council of
California to promote broadband adoption opportunities to the Native American
Tribes, communities, and Native American lands in California." (Narrative, p.
18).

The CPUC believes that these measures will ensure the involvement of
California's Indian tribes and tribal governments are involved in this grant
process.

3.   Parcel Data: If using census block level data, please explain how
parcel data will be used to disaggregate/verify census block information (pg

1

12)? If using census blocks, how will your project's use of parcel data differ from the planned approach for address-level data?

Even given the changes in how availability data will be collected as described in the NOFA Clarification, our continued use of a state parcel map layer remains critical to our verification and analysis processes, our interactive map, as well as the program planning element of our proposal.

With regard to verification, use of the state parcel map will identify owners of parcels in blocks and street segments reported to be served. Thus identified, a statistical sample of these owners can be contacted to verify the reported availability. The state parcel map will be critical to verifying wireless availability in analyzing shapefiles received from providers, when we take spectrum frequency and elevation information into account. We need to know where the households are in a particular census block compared to the area covered by wireless signals. There is no other way to make this determination, which will be used our analysis of broadband coverage.

Also, we anticipate that many broadband providers will choose to provide us with street level availability data rather than perform the geocoding and analysis they would need to do in order to determine the size of the census block served and report either by census block or street segment. In such instances, we will use the state parcel map for geocoding and verification purposes, as described in our grant application.

With regard to analysis, for example, our state parcel map layer will be the only source of accurate numbers of households and businesses within each block on a yearly basis. This information is not available from the Census Bureau on a block level, nor is household data available from the Census Bureau in inter-census years for other census geographies. Without the state parcel map, we will be forced to rely on growth estimations which are far from accurate at the county level, and don't account for variations of growth patterns within counties. The information from the state parcel map is important if we are to determine the number of served and unserved households and businesses in each block (whether 2 sq. miles or less, or larger), and to aggregate to larger units such as tract, county and state, and to compare the variability of broadband availability among these areas.

Another example of the impact of state parcel map data on analysis would be the ability to accurately calculate not only the number of households served or unserved, as discussed above, but the number of households being served by multiple broadband providers. This is true for the smaller blocks, to the extent that some providers report to us by street address, and in the larger blocks, where we need to know how many households are located on each street segment.

We will also use the state parcel map data to perform the online address lookup function on our interactive state map, as it will be the most accurate data source available.

Finally, we offer the following example with regard to the critical nature of the state parcel map data in the program planning activities. In larger blocks where street segments with service available will be reported to us, the state parcel map will inform potential providers as to the location and

number of unserved (or underserved) parcels, so they can determine the feasibility of providing broadband service to them, or aggregate demand from unserved parcels located on nearby or adjacent street segments.

4.   Software/Hardware: Please explain whether others programs will be utilizing any of the equipment or software purchased for implementation of this Program.

The CPUC currently has no plans to use the equipment and software that will be purchased for implementation of this Program for additional purposes. This software/ hardware was not planned to be purchased by the CPUC, and was not included in the CPUC's budget before our grant application was submitted to the NTIA on August 13, 2009. As explained in our grant application, the CPUC does not currently have any of the necessary equipment or software to implement the interactive, on-line mapping program that we intend to create using data collected under this grant program. It is our intention that all hardware/ software purchased with grant funds be used for this purpose.

5.   Data: Pursuant to the Technical Appendix in the NOFA, please clarify that metadata will be incorporated for all GIS products.

Yes, we will incorporate metadata in all GIS information we provide to the NTIA.

All GIS software we will be using includes a metadata system that is compliant with metadata standards as used by the Federal Geographic Data Committee (FDGC) and the International Organization for Standardization (ISO). The tools for creating and managing metadata are included in the core GIS software products by ESRI.

Beyond providing the NTIA with the standard FGDC metadata that would accompany the spatial data sets we receive from broadband providers, additional metadata will be added by the CPUC documenting the changes made to the initial collected datasets. The documentation will be expanded to include, but not be limited to, the following for each dataset:

1)   Creation of data (date and author)
2)   Methodology and modeling used for verification and geoprocessing
3)   Alterations made

6.   Planning Funds: Please review the requirements described in the Notice of Funds Availability and provide additional information for the use and budget for the planning funds. Please notify us if you require additional time beyond Thursday, September 10, 2009 at 10am ET to submit information.

In response to NTIA's request for additional information on the use and budget for planning funds, we offer the following amplification of our proposed planning project:

A. The California State University, Chico, will segment existing broadband demand studies and regions of the State of California into areas of low (0-40%), medium (41-59%), and high (60-100%) broadband adoption rates.

Using both data from the CPUC for subscription rates for wireline services as well as from survey data generated by various California Emerging Technology Fund Broadband

Demand Aggregation Projects; CSU, Chico will categorize broadband subscriptions (adoption rates) by household throughout California. Once segmented by a percentage of adoption rate, those areas with low and medium adoption rates will be targeted for outreach programs designed to facilitate the adoption and use of broadband services. This data will be reviewed on an annual basis to determine the effectiveness of these outreach programs and progress will be monitored by the CPUC based upon reported subscription rates over the length of this project.

B. CSU, Chico will work with identified Internet service providers in areas of low and medium adoption regions to:

1) Develop technology-neutral broadband awareness materials that can be distributed by the providers to promote broadband adoption. These materials can include, but are not limited to:

    i.   White Papers
    ii. Articles
    iii. Reference Documents
    iv. Fact Sheets
    v.   Provider Listings

2) Materials developed will be updated based upon new technology, updated standards, and new reference information.

CSU, Chico has already conducted 26 county level focus group and informational sessions as part of a broadband awareness campaign conducted in concert with two extant Broadband Demand Aggregation projects in northern California. These county meetings included invited representatives from county and municipal government, the business community, the K-12 education community, community colleges and universities, the agricultural industry, medical facilities and staff, and other community based organizations. The results of these meetings have been captured and will be used as the basis for promotional marketing literature designed to identify the need and demonstrate the opportunity for adoption of high speed internet services as part of a connected community, state, country and world.

White papers, reference documents, and fact sheets will be prepared by industry cluster describing the issues and benefits in adopting high speed Internet technology. Separate provider listings will be made available on a local and regional basis. Articles will be authored for inclusion in trade journal, technical publications, and other reference material used by targeted government and industry groups.

Based upon discussions with Internet Service Providers, these sources of technology-neutral unbiased material documenting the advantages and benefits of broadband services are the best means of promoting the direct adoption of high speed Internet services by both households and businesses. It is the intent of CSU, Chico to make these materials available for distribution by and through any service provider in order to augment their current marketing efforts.

3) Work with local libraries and anchor institutions to provide local resources where residents can obtain un-biased awareness and outreach materials as well as conduct meetings, seminars and demonstrations of broadband uses and benefits.

Based upon the list of anchor institutions created for the mapping portion of this effort, CSU, Chico will design, develop, and produce a series of educational and awareness programs to be hosted by the anchor institutions to promote the adoption of broadband. These programs will be supported by collateral material of the type created in concert with the Internet Service Providers that discuss in a technology neutral manner the features and benefits of different high speed Internet technologies. These educational and awareness programs can either be face-to-face meetings or can be via interactive webinars, demonstrating the capabilities of the technology.

4) Work with the Inter-Tribal Council of California to promote broadband adoption opportunities to the Native American Tribes, communities, and Native American lands in California.

Unlike other states that have designated lands reserved for a Native American population, California's 117 recognized tribes are spread out across a vast array of Reservations, Rancherias, and Tribal Lands. To access these Native Americans will take a concerted effort of working with and through tribal representatives. To that end, it is the intent of CSU, Chico to work through the Inter-Tribal Council of California, other Native American organizations such as the Native American Heritage Commission, the various Native American Tribes themselves, and the CPUC to identify those Native American lands that are being supported by broadband technologies or where broadband technology will soon be installed. In concert with the build out of high speed Internet infrastructure, educational and awareness programs will be provided, points of contact established, and promotional materials prepared and coordinated with each Tribal governmental entity.

5) Create a technology "petting zoo" to demonstrate broadband technology and hardware for use in conjunction with outreach meetings and events.

It is the intent of CSU, Chico to create a mobile laboratory of Internet technology and hardware that will demonstrate the different mechanisms for transmitting a high speed Internet signal. This can include the set up of a DSL connection, a wireless connection, the use of routers, WiFi access points, mobile broadband products, remote digital cameras, and other technology based solutions that take advantage of high speed Internet service. In addition, CSU, Chico will create and develop its own server based set of applications and services to which these mobile applications can connect – and that connection can be demonstrated at community events conducted in anchor institutions, libraries, and on tribal lands as appropriate. The purpose of this mobile approach is to allow individuals to access, utilize, and "play with" the technology in a neutral environment where the free flow of un-biased information can be exchanged – and where interested parties can play with the technology.

C. CSU, Chico (in its capacity as the Lead Small Business Development Center for Northeastern California) will work with the other Lead SBDC's and/or regional planning organizations to establish technology planning groups to:

1) Benchmark technology across community and business sectors
2) Set goals for technology use within each sector, and
3) Develop a tactical business plan for achieving the goals with specific recommendations for online application development and demand creation.

CSU, Chico is one of six Lead SBDC's within the State of California that together manage 35 separate delivery centers. In this capacity, CSU, Chico will leverage its relationship with the other Lead SBDC's to create regional planning groups within each SBDC region that is representative of the various industry clusters found in those regions. These industry cluster planning groups will then identify the number of broadband subscribers by industry type, identify the applications used by industry type, and identify goals for improving both the level of broadband adoption and the applications used by industry type. These regional planning groups will also share information across industry types as well as across regions.

CSU, Chico will work with local Internet service providers and the regional planning groups to identify incentives for the promotion of broadband services by business clients. For example, CSU, Chico will investigate the feasibility of having K-12 educational activities, community colleges and universities work with Internet service providers to develop bundled subscriber services when used in conjunction with distance education programs. Similar value-add services will be investigated for other areas where business activity requires either a user-base or an employee-base of Internet subscribers. Each regional planning organization will develop a tactical plan for increasing both the level of penetration of broadband services for each industry sector as well as for increasing the use of that service in support of the business. Working through the planning groups, promotional events will be scheduled and promotional material provided.

Anticipated planning groups will be established regionally for county and municipal government (administrative services and public safety), agriculture, manufacturing, business services, education (K-12 and higher), medical (doctors, clinics, and hospitals), Native Americans, and other community-based organizations. CSU, Chico will work with the Corporation for Education Network Initiatives (CENIC) to promote broadband adoption in local communities by leveraging the back-haul capability that CENIC can provide. Additionally, CSU, Chico will coordinate with the California Telehealth Network (CTN) so as not to duplicate or provide redundant support services throughout the medical community (doctors, clinics, and hospitals). Where possible and appropriate, CSU, Chico will reach out to industry trade associations and special purpose groups and activities to coordinate broadband promotional activities.

Broadband Planning Activities Timeline

	Year 1				Year 2				Year 3				Year 4			
Task	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
A. Determine Broadband Adoption Rates by Geographic Region	O—O				O				O				O			
B1. Develop Broadband Marketing Material for Use with ISPs		O---------O														
B2. Update Broadband Marketing Material for Use with ISPs as Appropriate					O--O											
B3. Create Education and Awareness Program; Provide Marketing Materials to Anchor Institutions; and Conduct Meetings, Seminars, and Demonstrations at Anchor Institutions			O--O												
B4. Conduct Meetings, Seminars and Demonstrations for Native American Tribes and Communities					O--O											
B5. Create Technology Demonstration Petting Zoo for Use at Meetings and Seminars			O--O												
C1. Develop Planning Councils through Lead SBDC Offices for Industry Sectors		O-----------O													
C2. Create Benchmarks and Goals for Adoption within Industry Sectors			O---------------------O											
C3. Develop and Implement a Business Plan to Achieve Goals for Broadband Adoption within Industry Sector					O--O										

SCOPE OF WORK
California State University, Chico Research Foundation
Pursuant to California's State Broadband Data and Development Grant Program
Application

The Foundation will perform consulting services to verify the data collected by the CPUC pursuant to the State Broadband Data and Development Grant Program (SBDD Program). Further, the Foundation will create shapefiles for each submitting service provider based on the data they provide to the CPUC, develop a broadband speed test and reporting tool that will measure broadband speeds to a specific and known server, and develop an on-line digital mapping application that will identify the type of Internet service available, speeds available for that service, the service providers, and an address look-up function and the speed test function identified above, and other features determined through consultation between the CPUC and the Foundation. In addition, the Foundation will develop an internal mapping capability unrestricted in terms of proprietary data and incorporating initial analytical tools. The public application will also provide an area for capturing public comments regarding the speed and quality of service being provided by the local service provider and/or what is desired to be purchased, as identified by the user of the function. Data captured through this on-line application will be married with the survey data and reported to the CPUC as part of a complete broadband availability and verification report. Further, the Foundation will assist the CPUC in setting up a GIS system that the CPUC can use for data verification and mapping functions for this Grant Program.

The Foundation will perform the above discussed consulting services for 2 years, per the terms of the Grant Award. The cost associated with these consulting services is accounted for in the detailed budget spreadsheet submitted to the NTIA as part of our grant application, as well as in the Cost Analysis section, below.

In addition to the broadband mapping consultation, the Foundation will perform tasks associated with demand side data and conduct specific outreach programs to facilitate the adoption and use of broadband services concentrating on areas where broadband penetration is significantly below the state average. This task will be performed for 4 years, the duration of the broadband planning portion of the State Broadband Mapping Program.

Task 1: Foundation Consulting Services

A. Broadband Availability Verification

The Foundation will perform verification for this Task based upon data submitted by broadband service providers in support of the CPUC's grant from the NTIA under its SBDD Program.

Tasks to be performed:

1) Validate the accuracy of the broadband availability data received. This task will be performed by conducting telephone interviews using a probability sample with a 95% confidence of California subscribers. The Foundation will contact an appropriate number of unique wireline subscribers semi-annually in order to achieve a statistically significant sample of both rural and non-rural subscribers throughout the state. The Foundation will request that those subscribers conduct a broadband speed test, and report the results via telephone survey. This task shall be conducted in accordance with the requirements of the NTIA's NOFA to achieve statistically significant samples of all addresses and of rural addresses.

2) For <u>Wireline Broadband Service Providers</u>, the Foundation will compare provider data with known network information, derived from TeleAtlas Data and cable systems information available from the FCC.

3) For <u>Wireless Broadband Service Providers</u>, the Foundation will apply a wireless propagation model and use it to verify the data submitted, as well as FCC tower information that may be available.

4) Verify data submitted under this Grant Program by comparing them with subscription data submitted by these same providers via the FCC's Form 477.

5) Implement a broadband speed test and reporting tool that will measure broadband speeds actually being received by subscribers.

6) Establish contact with the various Internet Service Providers, as needed, to follow up on validity issues with the data they have submitted to the CPUC as a result of the Foundations verification processes.

Task Deliverables:

2

The Foundation will deliver the following products and services:

1. Verification Reports of the data submitted by each provider. These reports will outline by provider and geography statistical analysis (e.g. quality assessments) the validity of each provider availability data. The common geography assessment will be either 1) county based statistics or 2) statistically valid aggregate geography based on where providers serve. These geographies will be determined by the Foundation and CPUC working in conjunction with each other. All verification tasks and deliverables will conform to the requirements of the NOFA.

B. Creation of Provider Specific Shapefiles

Using verified broadband data from Task 1.a, above, the Foundation will create shapefiles for each broadband service provider detailing the specific data collected under this Grant Program.

Tasks to be performed:

1. Based upon the data and shapefiles submitted to the CPUC under this Grant Program, the Foundation will create individual shapefiles for each broadband provider. These shapefiles will depict the following information by census block or street segment, as appropriate:
   a. Provider name
   b. Technology used by provider to provision broadband service
   c. Subscriber-Weighted Nominal Speed
   d. Wireless Frequency Bands
   e. Typical Speeds (as that info is gathered)
2. Overlay Maximum Advertised Speed data (submitted by Metropolitan/ Rural Statistical Area) over census block/ street segment data.
3. Apply a model to use as alternate wireless service availability data and create wireless availability shapefiles for each provider submitting said data.

Task Deliverables:

The Foundation will deliver the following products and services:

1. Individual shapefiles for each provider depicting all data submitted under this Grant Program.

2. Implement a <u>wireless broadband propagation model</u> taking into account terrain features, generalized vegetation penetration data, and other factors influencing wireless broadband signal acquisition. This model can also be used to validate wireless shapefile submissions, if specific information necessary was submitted, made by Wireless Internet Service Providers to the CPUC.

3. Implement a <u>signal degradation model</u> to validate transmission speeds and coverage areas for wireline Internet Service Providers using xDSL technology. As validation data is accumulated, these accessibility models will be updated based upon specific and/or unique features impacting the availability of broadband signal levels.

4. The Foundation will create and deliver to the CPUC a model using ArcGIS ModelBuilder that will document all the geoprocessing operations and tasks performed on provider-submitted broadband data sets.

C. Develop Online State Broadband Mapping Tool

Utilizing the provider shapefiles created in Task 1.b, the Foundation will develop an online state broadband mapping tool to be used by the CPUC for both public and internal purposes.

Tasks to be performed:

1. In cooperation with the CPUC GIS Team, the Foundation will develop a browser-based <u>web mapping application</u> for the CPUC that will be searchable by address and will identify certain elements for public use including, but not limited to, the following:
   a. A list of providers serving that address
   b. Area served by each provider: by census block/ street segment
   c. Maximum advertised speed for each provider
   d. Typical speed, as available
   e. Technology type, if desired.

2. Create a mapping tool for use internal to the CPUC that will identify all of those elements listed above including, but not limited to, the following:
   a. The type of technology used by each provider for available internet service
   b. Subscriber-weighted nominal speed
   c. Infrastructure information including middle-mile connection points, TeleAtlas, and FCC data, etc.

4

    d. Wireless frequency used

    e. Selected Census data

    f. 477 Subscriber data

    g. Community Anchor Institutions

3. Provide the CPUC with consulting services for setup, development and design for both internal and public web mapping applications. This includes customization of the browser based web mapping applications (using ESRI's ArcGIS Server software), database design and setup, and providing on-site GIS training and technical support.

Task Deliverables:

The Foundation will deliver the following products and services:

1. A functional working browser based web mapping application built with specifications including, but not limited to, the following:

    a. Address look-up function

    b. Zooming function to the neighborhood level

    c. Ability to toggle individual providers on and off as the user requires

    d. Ability to select and search by maximum advertised speeds

2. On site training and technical support of the browser based web mapping tool

3. Detailed reports of speed test results gathered by the <u>browser based</u> tool

4. All software utilized for the deliverables above, and related documentation

D. Assistance in Setting up a GIS at CPUC

    The Foundation will provide the CPUC with consulting services to assist in setting up GIS at the CPUC, to organize, store, and analyze broadband availability data, and utilize the developed internal and public web mapping applications created in Task 1.B and C.

Tasks to be performed:

1. Evaluation of existing CPUC GIS hardware, network setup, and GIS environment

2. Provide the CPUC with consulting services for design, engineering and setup for both GIS infrastructure and a GIS database,

3. Provide on-site GIS training and technical support for new GIS infrastructure and database use

Task Deliverables:

The Foundation will deliver the following products and services:

1. Detailed reports documenting CPUC GIS system architecture, design and setup and recommended solutions if any are needed.
2. Provide on-site GIS training and technical support.

Task 1 will be performed by the Foundation for 2 years, the initially funded duration of the State Broadband Mapping Program and such additional period as may be funded by the NTIA until September 30, 2014.

Task 2: Broadband Planning

A. Determining and reporting broadband adoption rates.

Tasks to be performed:

1. The Foundation will segment existing broadband demand studies and reports of broadband subscribership (penetration) within the state of California into geographic areas of low, medium, and high broadband adoption rates, with the definition of such segments to be determined by the parties following collection and analysis of the data.
2. As subscriber data is submitted to the CPUC bi-annually, as stipulated under this Grant Program, and adoption data is available to the CPUC bi-annually from the FCC, these adoption determinations will be updated by the Foundation.
3. The Foundation will develop tabular and spatial analyses of these data submissions.

Task Deliverables:

The Foundation will deliver the following product(s):
1. Semi-annual reports summarizing the growth and level of broadband subscribership by geographic area in tabular format and in a spatial representation.

B. Contacting target groups and other Sustainable Broadband Adoption grant recipients to identify and share best practices, success stories, and adoption materials.

Tasks to be performed:

1. The Foundation will work with and through Native American Tribal organizations (including, but not limited to, the Inter-Tribal Council of California, The American Indian Advisory Council, the Northern California Indian Development Council, and the California Native American Heritage Commission) to identify and categorize different levels of Broadband adoption among the Native American communities in California; identify the best

practices for promoting Broadband adoption; and share those best practices, success stories and adoption materials that have been successful in promoting Broadband adoption throughout the Native American communities.

2. Identify and contact recipients of NTIA's Sustainable Adoption Funding in California, and other entities having a focus on broadband adoption, to identify and share best practices, success stories and adoption materials among these organizations.

3. Encourage targeted groups and individuals to use the CPUC on-line broadband coverage maps to validate broadband service, to identify potential carriers of service, and to offer feedback on the quality of broadband services provided.

Task Deliverables:

The Foundation will deliver the following product(s):

1. Quarterly reports documenting the groups identified, a summary of their means of promoting broadband adoption, the success stories of various adoption activities, and best practices being utilized to promote broadband adoption.

C. Identify technology and other interest-specific groups, local government and community-based organizations, and regional planning organizations to coordinate and distribute broadband adoption materials, statistics and success stories.

Tasks to be performed:

1. The Foundation will identify those industry and trade associations that promote business applications for their membership and client base which require a broadband connection. The Foundation will use this information in order to identify the best practices and success stories used to promote the adoption of broadband services and to obtain any statistical information on the rate of broadband adoption in order to share this information with other broadband adoption projects and groups.

2. The Foundation will meet with and brief County Boards of Supervisors and County Administrative and Chief Information Officers on the rates of development of broadband resources and adoption in their counties. The Foundation will solicit support for and encouragement of broadband adoption throughout local and municipal government activities.

3. The Foundation will meet with regional planning organizations, workforce and economic development activities and other community based organizations to share and promote best practices, success stories, and broadband adoption statistics and information.

4. The Foundation will encourage these organizations and individuals to use the CPUC on-line broadband coverage maps to validate broadband service, identify potential carriers of service, and to offer feedback on the quality of broadband services provided.

Task Deliverables:

The Foundation will deliver the following product(s):

1. Quarterly reports documenting the groups identified, a summary of their means of promoting broadband adoption, the success stories of various adoption activities, and best practices being utilized to promote broadband adoption.

PRICE ANALYSIS

Task 1.A and B: Consulting services for broadband availability verification and creation of provider-specific shapefiles

	FY 2009/10 (7/01/09 - 6/30/10)	FY 2010/11 (7/01/10 - 6/30/11)	
Personnel			
Salaries and Wages			
Project Manager/Trainer	$42,500	$19,992	
GIS Analyst	$39,630	$31,500	
GIS Assistant	$51,490	$39,909	
Programmer	$16,380	$8,600	
Total Personnel	$150,000	$100,000	
TOTAL COSTS	**$150,000**	**$100,000**	**$250,000**

Task 1.C and D: Development of an online mapping tool and assistance in setting up a GIS at CPUC

	FY 2009/10 (7/01/09 - 6/30/10)	FY 2010/11 (7/01/10 - 6/30/11)	
Personnel			
Salaries and Wages			
Project Manager/Trainer	$25,500	$11,156	
GIS Analyst	$24,000	$12,600	
GIS Assistant	$30,400	$11,970	
Programmer	$10,080	$3,308	
Total Personnel	$89,980	$39,034	
Travel	$10,020	$966	
TOTAL COSTS	**$100,000**	**$40,000**	**$140,000**

Task 2: Broadband Planning

	GY 2009/10 (10/01/09 – 9/30/10)	GY 2010/11 (10/01/10 - 9/30/11)	GY 2011/12 (10/01/11 - 9/30/12)	GY 2012/13 (10/01/12 - 9/30/13)	GY 2013/14 (10/01/12 - 9/30/13)	
Personnel						
Salaries and Wages						
Assistant Director	$15,750	$12,600	$12,600	$6,300	$0	
Project Manager	$42,750	$38,250	$38,250	$33,750	$0	
Researcher	$760	$760	$760	$760	$0	
Administrative					$0	
Manager	$2,393	$2,393	$2,393	$2,393		
Event Coordinator	$6,883	$6,883	$6,883	$5,162	$0	
Economist	$1,167	$1,167	$1,167	$1,167	$0	
Research Assistants	$6,240	$6,240	$6,240	$5,304	$0	
Fringe Benefits	$26,393	$23,692	$23, 692	$19,099	$0	
Total Personnel	$102,335	$91,985	$91,985	$73,935	$0	
Consultant	$10,000	$2,700	$2,700	1,000	$0	
Operating Expenses	$8,633	$6,122	$6,122	$5,710	$0	
Foundation and					$0	
Administrative Costs	$29,032	$24,194	$24,194	$19,355		
TOTAL COSTS	**$150,000**	**$125,000**	**$125,000**	**$100,000**	**$0**	**$500,000**

Total Contract Cost: **$890,000**

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

January 20, 2010

Anne Neville
Program Director - State Broadband Data and Development Grant Program
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Ave, NW, Room 4716
Washington, DC, 20230

Re: State Broadband Data & Development Grant Program
     Award Number 06-05-M09001

Dear Ms. Neville,

     The California Public Utilities Commission (CPUC) submits this letter and associated attachments to amend our previous budget revision, submitted pursuant to Paragraph 7 of the above-captioned Financial Assistance Award, regarding California's expected purchase of hardware, software and other information systems to be purchased in Year 1 and Year 2 of the grant aware period.

     The original requested amount by California for years 1 and 2 of the Grant Program was $816,894. The CPUC revised its request on October 30, 2009. At that time the expected total for all hardware and software costs was $791,478. This total has changed since October 30, 2009 due to changes in quoted prices and additional required hardware solutions. These changes are noted in yellow in the attached spreadsheet.

     The new actual amount expected total for our proposed hardware and software purchases is $810,373. This amount reflects the verified prices for all originally requested hardware and software, as well as 4 additional hardware requirements not originally anticipated. This new total reflects our expected expenditures for years 1 and 2 of this Grant Program, 2009-2010 and 2010-2011. The expected timeline for all purchases is also detailed in this spreadsheet.

     All values are based on current invoices, costs, and market conditions. Should you have any questions or concerns, please let us know.

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

Sincerely,

Michael Morris
California Public Utilities Commission

cc:

Joyce F. Brigham
National Institute of Standards of Technology
Grants and agreements Management Division
Bldg. 411, Room B-100
100 Bureau Drive, Mail Stop 1650
Gaithersburg, Maryland 20899-1650

CALIFORNIA PUBLIC UTILITIES COMMISSION
SUMMARY OF EXPENSES, BROADBAND MAPPING PROJECT BUDGET 2009-2011
(Revised Jan. 14, 2010)

Hardware Costs	$202,512.00	$275,024.00	$477,536.00
Software Costs	$254,889.00	$84,469.00	$339,358.00
Subtotal Hardware and Software Costs	$457,401.00	$359,493.00	$816,894.00

Revised Hardware Costs (10/2009)	$197,464.00	$255,045.00	$452,509.00
Revised Software Costs (10/2009)	$198,101.00	$140,868.00	$338,969.00
Subtotal Hardware and Software Costs	$395,565.00	$395,913.00	$791,478.00

Revised Hardware Costs (1/2010)	$216,359.00	$255,045.00	$471,404.00
Revised Software Costs (1/2010)	$198,101.00	$140,868.00	$338,969.00
Subtotal Hardware and Software Costs	$414,460.00	$395,913.00	$810,373.00

Qty.	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested (From Aug. 2009 Application)	Revised Amount Requested (From Oct. 2009 Purchase Schedule)	Corrected Amount (on 0.5%. Sales Tax) as of Jan. 2010	Source	Purchase Timeline
			Hardware Costs:					
1	$11,000.00	ArcGIS 9.3.1 Enterprise GIS Server 1 Maintenance	Annual Hardware & Software maintenance cost for GIS Server 1 (ArcGIS Server Object Container (SOC)/Server Object Manager (SOM)/SQL Server 2005 ArcSDE Database System). The amount requested was corrected due to new information obtained from ESRI.	$11,000	$10,020	$10,020	ESRI_QUOTE_Maintenance_10_09.pdf	3rd Quarter 2010
1	$30,000.00	GIS Server 2 (SOC/SOM/DB)	GIS Server 2 - Internal server exclusively assigned for Broadband Mapping Applications, will be the failover for GIS Server 1. This is a Dell Server of approximately the same class as GIS Server 1 and will be configured as a SOC/SOM/SQL Server 2005 ArcSDE. Will be located in San Francisco as GIS Server 1 will be transferred to Los Angeles as part of the Business Continuity Plan for the CPUC IT Enterprise.	$30,000	$18,615	$18,615	Dell_Online_Store_SERVER_10_09.pdf	4th Quarter 2009
1	$95,000.00	Backup Solution for GIS Server 2 (SOM/SOC/DB)	Backup solution offsite, data streaming, backup management with updates and replicated SAN storage, this has been broken down in detail below.	$95,000	$0	$0	N/A	N/A
1	$512.00	Data OffSite Storage	Cost of Data Offsite Storage for GIS Server 1 at $ 512/Terrabyte, this has been broken down in detail below	$512	$0	$0	N/A	N/A
1	$50,000.00	GIS Data/Web Applications Outside Hosting	CERES/CalAtlas--Public side of the GIS Broadband Mapping Application (includes hosting, map rendering and tech support)	$50,000	$50,000	$50,000	CERES/CalAtlas Estimate	1st Quarter 2010
6	$500.00	GIS Workstation Upgrades	To cover hardware and software upgrades to existing workstations--now changed to GIS Workstation Purchase	$3,000	$0	$0	N/A	N/A

Qty.	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested (From Aug 2009 Application)	Revised Amount Requested (from Oct 2009 Purchase Schedule)	Corrected Amount (at 9.5% Sales Tax) as of Jan. 2010	Source	Purchase Timeline
1	$13,000.00	GIS Mobile Workstation	Notebook PC for Offsite GIS Data Collection, Analysis and Presentations, corrected figures from ESRI	$13,000	$11,695	$11,695	ESRI_QUOTE_hp_arcinfo_10_09.pdf	4th Quarter 2009
2	$15,519.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): Barracuda Backup Appliance	The original quote bundled the backup appliance with the additional SAN Storage, detailed below. The revised quote is for TWO (2) Barracuda 890 Series Backup Appliances (this is a revised quote, pricing based on purchase order)	$0	$34,017	$33,112	Cybertek_quote_10_09.pdf (original), 09CI9271.pdf (revised)	4th Quarter 2009
1	$3,359.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): Barracuda Load Balancer	Barracuda Load Balancer Model 430, part of Barracuda Backup System not included in the original estimate. (this is also a revised quote, pricing based on purchase order, the model has changed to Model 440)	$0	$3,777	$3,678	Cybertek_quote_10_09.pdf (original), 09CI9271.pdf (revised)	4th Quarter 2009
1	$20,000.00	Backup Solution for GIS Server 2(SOM/SOC/DB): SAN Storage SF	Dell Clarion CX3-20 SAN Storage Upgrade (1 Tray = 15 X 1TB). This is storage for data that will be duplicated from GIS Server 2 for the San Francisco location for high availability	$0	$18,348	$18,348	CSSI_QUOTE_10_09.pdf	4th Quarter 2009
1	$20,000.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): SAN Storage LA	Dell Clarion CX3-20 SAN Storage Upgrade (1 Tray = 15 X 1TB). This is storage for data that will be duplicated from GIS Server 2 for the Los Angeles location for high availability	$0	$18,348	$18,348	CSSI_QUOTE_10_09.pdf	4th Quarter 2009
1	$10,080.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): Data Offsite Storage	Cost of Data Offsite Storage for GIS Server 2 at $ 512/Terrabyte, now revised for the cost of 1 TB storage offsite quoted from Barracuda (this is a revised quote for data offsite for TWO Barracuda 890 Series Backup Appliances and sales tax is not added to total, see above)	$0	$5,818	$10,080	Cybertek_quote_10_09.pdf, 09CI9271.pdf (revised)	4th Quarter 2009

Qty.	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested (From Aug 2009 Application)	Revised Amount Requested (from Oct 2009 Purchase Schedule)	Corrected Amount incl. 9.5% Sales Tax as of Jan. 2010	Source	Purchase Timeline
1	$3,326.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): 1 Yr Premium Support for Barracuda 890	Cost of 1 Yr. Premium Support for TWO (2) Barracuda 890 Series Backup Appliances (new requirement for Barracuda purchase discovered after 10/2009 purchase schedule submission, sales tax not added to total)	$0	$0	$6,652	09CI9271.pdf (revised)	4th Quarter 2009
1	$3,359.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): 1 Yr Instant Replacement for Barracuda 890	Cost of 1 Yr.Instant Replacement for TWO (2) Barracuda 890 Series Backup Appliances (new requirement for Barracuda purchase discovered after 10/2009 purchase schedule submission, sales tax not added to total)	$0	$0	$6,718	09CI9271.pdf (revised)	4th Quarter 2009
1	$1,511.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): 3 Yr.Energizer Updates for Barracuda 440	Cost of 3 Yr.Energizer Updates for Barracuda Load Balancer Model 440 (new requirement for Barracuda purchase discovered after 10/2009 purchase schedule submission, sales tax not added to total)	$0	$0	$1,511	09CI9271.pdf (revised)	4th Quarter 2009
1	$755.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): 1 Yr Instant Replacement for Barracuda 440	Cost of 1 Yr.Instant Replacement for Barracuda Load Balancer Model 440 (new requirement for Barracuda purchase discovered after 10/2009 purchase schedule submission, sales tax not added to total)	$0	$0	$755	09CI9271.pdf (revised)	4th Quarter 2009
7	$3,500.00	GIS Workstation Purchase	Cost of new HP GIS workstations for Associate ISA (2), RPS II (1), RA II (GIS) (2), PURA II (2), originally quoted for GIS Workstation Upgrades	$0	$26,828	$26,828	HP_QUOTE_GISWKSTN_10_09.pdf	4th Quarter 2009
		TOTAL:		$202,512	$197,464	$216,359		

Qty	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested (From Aug. 2009 Application)	Revised Amount Requested (from Oct. 2009 Purchase Schedule)	Corrected Amount (per Q-50A Sales Tax) as of Jan. 2010	Source	Purchase Timeline
			Software Costs:					
2	$3,300.00	ArcInfo 9.3.1 Concurrent License Maintenance	Annual license maintenance cost for 2 existing concurrent licenses, now corrected to one primary at $ 3,000, the other secondary at $ 1,098.08)	$6,600	$4,487	$4,487	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
1	$8,415.00	ArcInfo 9.3.1 Concurrent License	Annual license cost (new) for Associate ISA (Specialist) hire, now corrected to $ 7,295	$8,415	$7,988	$7,988	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
3	$5,950.00	ArcEditor 9.3.1 Concurrent License	Annual license cost (new) for 2 Research Analyst II (GIS) hires and 1 Public Utilities Regulatory Analyst II hire, now corrected to $ 5,142 each)	$17,850	$16,891	$16,891	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
6	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	Data Interoperability Extension-for all staff with ArcGIS Desktop products (6 total-corrected at $ 1,836 each)	$12,240	$12,063	$12,063	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
6	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	3D Analyst Extension-for all staff with ArcGIS Desktop products (6 total-corrected at $ 1,836 each)	$12,240	$12,063	$12,063	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
6	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	Spatial Analyst Extension-for all staff with ArcGIS Desktop products (6 total-corrected at $ 1,836 each)	$12,240	$12,063	$12,063	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
6	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	Survey Analyst Extension-for all staff with ArcGIS Desktop products (6 total-corrected at $ 1,836 each)	$12,240	$12,063	$12,063	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009

Qty	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested (From Aug 2009 Application)	Revised Amount Requested (from Oct 2009 Purchase Schedule)	Corrected Amount (inc. 9.5% Sales Tax) as of Jan. 2010	Source	Purchase Timeline
6	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	Geostatistical Analyst Extension-for all staff with ArcGIS Desktop products (6 total-corrected at $ 1,836 each)	$12,240	$12,063	$12,063	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
1	$6,372.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	PLTS Foundation Concurrent Use-for Research Program Specialist II/III only corrected to $ 4,332 each	$6,372	$4,744	$4,744	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
1	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	JTX Desktop Concurrent Usefor Research Program Specialist II/III only	$2,040	$2,234	$2,234	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
2	$1,500.00	ESRI Developer Network Subscriptions	For developing scripts and programming mapping applications for 2 Associate ISAs (Specialist)..	$3,000	$3,285	$3,285	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
1	$15,000.00	SQL Server 2005 Enterprise License	Server plus 15 CAL pricing for GIS Server 1, now corrected to SQL Server Standard 2008 pricing for 4 processors for GIS Server 1-see below	$15,000	$0	$0	N/A	N/A
1	$17,090.00	ESRI/TeleAtlas Data	ESRI Demographic Data, TeleAtlas Telecommunications Data, now corrected to TeleAtlas Communications Data ONLY at $ 9,000 /year	$17,090	$9,855	$9,855	ADCI_QUOTE_10_09.pdf	4th Quarter 2009
1	$16,322.00	ArcGIS Server 9.3.1 Enterprise Advance Staging Server License	For GIS Server 2, corrected to reflect correct licensing amount based on ESRI conversation 10/28/2009.	$16,322	$0	$0	N/A	N/A
4	$25,000.00	SQL Server 2005 Enterprise License	Per processor licensing for GIS Server 2, now corrected to SQL Server Standard 2008 pricing for 4 processors for GIS Server 2-see below	$100,000	$0	$0	N/A	N/A

Qty.	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested (From Aug. 2009 Application)	Revised Amount Requested (from Oct. 2009 Purchase Schedule)	Corrected Amount (re: 9.3.1 Sales Tax) as of Jan. 2010	Source	Purchase Timeline
1	$1,000.00	Windows 2003/2008 Server License	For GIS Server 2, corrected as the price is bundled to cost of GIS Server 2, see above.	$1,000	$0	$0	N/A	N/A
4	$6,000.00	SQL Server 2008 Standard License	For GIS Server 1, this is to license all 4 processors with unlimited data connections.	$0	$26,280	$26,280	MICROSOFT_PRICING_SQLSVR08_10_09.pdf	4th Quarter 2009
4	$6,000.00	SQL Server 2008 Standard License	For GIS Server 2, this is to license all 4 processors with unlimited data connections.	$0	$26,280	$26,280	MICROSOFT_PRICING_SQLSVR08_10_09.pdf	4th Quarter 2009
1	$32,643.00	ArcGIS Server 9.3.1 Enterprise Advance Production Server License	For GIS Server 2, corrected to reflect correct licensing amount based on ESRI conversation 10/28/2009.	$0	$35,744	$35,744	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
		TOTAL:		$254,889	$198,101	$198,101		

Qty.	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested (From Aug. 2009 Application)	Revised Amount Requested (from Oct. 2009 Purchase Schedule)	Corrected Amount (incl. 9.50% Sales Tax as of Jan. 2010	Source	Purchase Timeline
			Hardware Costs:					
2	$11,000.00	ArcGIS 9.3.1 Enterprise GIS Servers 1 and 2 Maintenance	Annual Hardware & Software maintenance cost for GIS Servers 1 and 2, corrected to reflect new figures obtained from ESRI at	$22,000	$20,040	$20,040	ESRI_QUOTE_Maintenance_10_09.pdf	3rd Quarter 2011
1	$18,000.00	GIS Server 3	Public (Internet) Applications (GIS Server 3). This is a Dell Server in the same class as GIS Servers 1 and 2, for capacity building for the internal web hosting of the online mapping application in year 3. This will be configured as an	$18,000	$18,615	$18,615	Dell_Online_Store_SERVER_10_09.pdf	4th Quarter 2010
1	$11,000.00	ArcGIS 9.3.1 Enterprise GIS Server 3 Maintenance	Annual maintenance cost for GIS Server 3, corrected to reflect new figures obtained from ESRI at $	$11,000	$10,020	$10,020	ESRI_QUOTE_Maintenance_10_09.pdf	3rd Quarter 2011
1	$18,000.00	GIS Server 4	Second ArcGIS Server for Public (Internet) Applications (GIS Server 4). This is a Dell Server in the same class as GIS Servers 1 , 2 and 3 as a failover for the public server. This will be configured as an ArcGIS SOM/SOC and DB and will be located	$18,000	$18,615	$18,615	Dell_Online_Store_SERVER_10_09.pdf	4th Quarter 2010
1	$11,000.00	ArcGIS 9.3.1 Enterprise GIS Server 4 Maintenance	Annual maintenance cost for GIS Server 4, corrected to reflect new figures obtained from ESRI at $	$11,000	$10,020	$10,020	ESRI_QUOTE_Maintenance_10_09.pdf	3rd Quarter 2011
1	$95,000.00	Backup Solution for GIS Server 3	Backup solution offsite, data streaming, backup management with updates and replicated SAN storage, this has been broken down in detail below, reassigned to	$95,000	$0	$0	N/A	N/A

Qty.	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested (From Aug 2009 Application)	Revised Amount Requested (from Oct 2009 Purchase Schedule)	Corrected Amount (incl. 9.5% Sales Tax as of 1 Jan 2010)	Source	Purchase Timeline
1	$1,024.00	Data OffSite Storage	Cost of Data OffSite Storage $ 50/100GB About 1TB/yr 1024@ 512/TB, this is broken down in detail below	$1,024	$0	$0	N/A	N/A
2	$2,000.00	GIS SOC Maintenance (GIS Servers 1 and 2) -- MS SQL Server 2008	Annual hardware and software maintenance cost for for the SOC portions of GIS Servers 1 and 2	$4,000	$4,380	$4,380	MICROS OFT_PRI CING_S QLSVR0 8_10_09.	4th Quarter 2010
1	$16,000.00	GIS SOC Only Server 1	Server Object Container (SOC) ArcGIS Server for Public GIS applications, complete database server quote with SQL Server 2008	$16,000	$17,520	$17,520	ESRI_QU OTE_dell _advance d_10_09. pdf	4th Quarter 2010
7	$1,000.00	GIS Workstation Replacements	Cost is calculated for replacement of 7 workstations to accomodate ArcGIS Desktop Products	$7,000	$0	$0	N/A	N/A
1	$50,000.00	GIS Data/Web Applications Outside Hosting	CERES/CalAtlas-- Public side of the GIS Broadband Mapping Application (includes hosting, map rendering and tech support)	$50,000	$50,000	$50,000	CERES/ CalAtlas Estimate	1st Quarter 2011
2	$15,533.00	Backup Solution for GIS Server 4: Barracuda Backup Appliance	The original quote bundled the backup appliance with the additional SAN Storage, detailed below. The revised quote is for TWO (2)	$0	$34,017	$34,017	Cybertek _quote_1 0_09.pdf	4th Quarter 2010
1	$3,449.00	Backup Solution for GIS Server 4: Barracuda Load Balancer	Barracuda Load Balancer Model 430, part of Barracuda Backup System not included in the original	$0	$3,777	$3,777	Cybertek _quote_1 0_09.pdf	4th Quarter 2010
1	$20,000.00	Backup Solution for GIS Server 4: SAN Storage SF	Dell Clarion CX3-20 SAN Storage Upgrade (1 Tray = 15 X 1TB). This is storage for data that will be duplicated from GIS Server 4 for the San Francisco	$0	$18,348	$18,348	CSSI_QU OTE_10_ 09.pdf	4th Quarter 2010

Qty	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested (From Aug. 2009 Application)	Revised Amount Requested (From Oct 2009 Purchase Schedule)	Corrected Amount (inc. 9.5% Sales Tax) as of Jan. 2010	Source	Purchase Timeline
1	$20,000.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): SAN Storage LA	Dell Clarion CX3-20 SAN Storage Upgrade (1 Tray = 15 X 1TB). This is storage for data that will be duplicated from GIS Server 4 for the Los Angeles	$0	$18,348	$18,348	CSSI_QUOTE_10_09.pdf	4th Quarter 2010
1	$5,313.00	Backup Solution for GIS Server 4: Data Offsite Storage	Cost of Data Offsite Storage for GIS Server 2 at $ 512/Terrabyte, now revised for the cost of 1 TB storage offsite quoted from	$0	$5,818	$5,818	Cybertek_quote_10_09.pdf	4th Quarter 2010
1	$2,000.00	Backup Solution for GIS Server 2 (Maintenance)	Barracuda Backup Solution for off-site, data streaming backup management with updates. Cost of Barracuda support for appliance bought in Year 1 now revised for the cost of 1 TB storage offsite quoted	$2,000	$5,818	$5,818	Cybertek_quote_10_09.pdf	4th Quarter 2010
1	$20,000.00	Network Upgrade Cost	Bandwidth expansion for new servers, includes additional peripherals for backup appliances and servers, cabling, switches and hubs at $	$20,000	$19,710	$19,710	CPUC-IMSD Technology Services Unit Estimate	4th Quarter 2010
		TOTAL:		**$275,024**	**$255,045**	**$255,045**		

Qty.	Annual Direct Cost	Description	Justification and Comment	Original Amount Requested (From Aug. 2009 Application)	Revised Amount Requested (from Oct. 2009 Purchase Schedule)	Contract Amount from PSA Sched. as of Jan. 2010	Source	Purchase Timeline
			Software Costs:					
3	$3,300.00	ArcInfo 9.3.1 Concurrent License Maintenance	Annual license maintenance cost for 1 Primary at $ 3,000 each, 2 Secondary Licenses at $ 1,098.08	$9,900	$5,690	$5,690	ESRI_QUOTE_Maintenance_10_09.pdf	3rd Quarter 2011
3	$1,000.00	ArcEditor 9.3.1 Concurrent License Maintenance	Annual license maintenance cost for 1 Primary at $ 1,500 each, 2 Secondary Licenses at $ 1,200	$3,000	$4,270.50	$4,270.50	ESRI_EMAIL_QUOTE_Maintenance_10_09.pdf	3rd Quarter 2011
2	$1,500.00	ESRI Developer Network Subscriptions	For developing scripts and programming mapping applications for Staff ISA (Specialist), Associate	$3,000	$3,285	$3,285	ESRI_QUOTE_ARCGIS_10_09.pdf	3rd Quarter 2011
1	$17,090.00	ESRI/TeleAtlas Data	ESRI Demographic Data, TeleAtlas Telecommunications Data, now corrected to TeleAtlas Communications Data	$13,925	$9,855	$9,855	ADCI_QUOTE_10_09.pdf	4th Quarter 2010
1	$1,000.00	Windows 2003/2008 Server License	For GIS Server 3/bundled with server cost (see above)	$1,000	$0	$0	N/A	N/A
1	$16,322.00	ArcGIS Server 9.3.1 Enterprise Advance Staging Server License	For GIS Server 4, corrected to reflect correct licensing amount based on ESRI conversation	$16,322	$0	$0	N/A	N/A
1	$1,000.00	Windows 2003/2008 Server License	For GIS Server 4	$1,000	$0	$0	N/A	N/A
1	$16,322.00	ArcGIS Server 9.3.1 Enterprise Advance Staging Server License	For GIS Server 4, corrected to reflect correct licensing amount based on ESRI conversation	$16,322	$0	$0	N/A	N/A
4	$6,000.00	SQL Server 2008 Standard License	For GIS Server 4, this is to license all 4 processors with unlimited data	$0	$26,280	$26,280	MICROSOFT_PRICING_SQLSVR0	4th Quarter 2010
1	$32,643.00	ArcGIS Server 9.3.1 Enterprise Advance Production Server License	For GIS Server 3, corrected to reflect correct licensing amount based on ESRI conversation	$0	$35,744	$35,744	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2010
1	$32,643.00	ArcGIS Server 9.3.1 Enterprise Advance Production Server License	For GIS Server 4, corrected to reflect correct licensing amount based on ESRI conversation	$0	$35,744	$35,744	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2010
1	$20,000.00	Parcel Mapping Data	To be paid to the office of the State CIO for maintenance costs	$20,000	$20,000	$20,000	CPUC Estimate	4th Quarter 2010
		TOTAL:		$84,469	$140,868	$140,868		

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

October 30, 2009

Anne Neville
Program Director - State Broadband Data and Development Grant Program
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Ave, NW, Room 4716
Washington, DC, 20230

Re: State Broadband Data & Development Grant Program
      Award Number 06-05-M09001

Dear Ms. Neville:

Pursuant to Paragraph 7 of the above-captioned Financial Assistance Award, the California Public Utilities Commission (CPUC) submits this letter and associated attachments regarding California's expected purchase of hardware, software and other information systems to be purchased in Year 1 and Year 2 of the grant aware period.

Attached to this letter is a detailed spreadsheet explaining California's expected purchase of hardware, software and other information systems. This spreadsheet details the price of each expected purchase, as well as the basis and justification for the figures provided. To original requested amount by California for years 1 and 2 of the Grant Program was $816,894. The actual expected total for these purchases is $791,478. This amount reflects the verified prices for our expected expenditures for years 1 and 2 of this Grant Program, 2009-2010 and 2010-2011. The expected timeline for all purchases is also detailed in this spreadsheet.

All values are based on current invoices, costs, and market conditions. Should you have any questions or concerns, please let us know.

Sincerely,

Michael Morris
California Public Utilities Commission

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE
SAN FRANCISCO, CA 94102-3298

Attachments:

Hardware-Software Budget Summary & Schedules
ARRA Hardware-Software Budget & Quotes - .zip file

cc:
Joyce F. Brigham
National Institute of Standards of Technology
Grants and agreements Management Division
Bldg. 411, Room B-100
100 Bureau Drive, Mail Stop 1650
Gaithersburg, Maryland 20899-1650

Robert Haga, CPUC

CALIFORNIA PUBLIC UTILITIES COMMISSION
SUMMARY OF EXPENSES, BROADBAND MAPPING PROJECT BUDGET 2009-2011

Hardware Costs	$202,512.00	$275,024.00	$477,536.00
Software Costs	$254,889.00	$84,469.00	$339,358.00
Subtotal Hardware and Software Costs	$457,401.00	$359,493.00	$816,894.00

Revised Hardware Costs	$197,464.00	$255,045.00	$452,509.00
Revised Software Costs	$198,101.00	$140,868.00	$338,969.00
Subtotal Hardware and Software Costs	$395,565.00	$395,913.00	$791,478.00

Qty.	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested	Corrected Amount (Incl. 9.5% Sales Tax)	Source	Purchase Timeline
			Hardware Costs:				
1	$11,000.00	ArcGIS 9.3.1 Enterprise GIS Server 1 Maintenance	Annual Hardware & Software maintenance cost for GIS Server 1 (ArcGIS Server Object Container (SOC)/Server Object Manager (SOM)/SQL Server 2005 ArcSDE Database System). The amount requested was corrected due to new information obtained from ESRI.	$11,000	$10,020	ESRI_QUOTE_ Maintenance_1 0_09.pdf	3rd Quarter 2010
1	$30,000.00	GIS Server 2 (SOC/SOM/DB)	GIS Server 2 - Internal server exclusively assigned for Broadband Mapping Applications, will be the failover for GIS Server 1. This is a Dell Server of approximately the same class as GIS Server 1 and will be configured as a SOC/SOM/SQL Server 2005 ArcSDE. Will be located in San Francisco as GIS Server 1 will be transferred to Los Angeles as part of the Business Continuity Plan for the CPUC IT Enterprise.	$30,000	$18,615	Dell_Online_Sto re_SERVER_10 _09.pdf	4th Quarter 2009
1	$95,000.00	Backup Solution for GIS Server 2 (SOM/SOC/DB)	Backup solution offsite, data streaming, backup management with updates and replicated SAN storage, this has been broken down in detail below.	$95,000	$0	N/A	N/A
1	$512.00	Data OffSite Storage	Cost of Data Offsite Storage for GIS Server 1 at $ 512/Terrabyte, this has been broken down in detail below	$512	$0	N/A	N/A
1	$50,000.00	GIS Data/Web Applications Outside Hosting	CERES/CalAtlas--Public side of the GIS Broadband Mapping Application (includes hosting, map rendering and tech support)	$50,000	$50,000	CERES/CalAtla s Estimate	1st Quarter 2010
6	$500.00	GIS Workstation Upgrades	To cover hardware and software upgrades to existing workstations--now changed to GIS Workstation Purchase	$3,000	$0	N/A	N/A

Qty.	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested	Corrected Amount (incl. 9.5% Sales Tax)	Source	Purchase Timeline
1	$13,000.00	GIS Mobile Workstation	Notebook PC for Offsite GIS Data Collection, Analysis and Presentations, corrected figures from ESRI	$13,000	$11,695	ESRI_QUOTE_hp_arcinfo_10_09.pdf	4th Quarter 2009
2	$15,533.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): Barracuda Backup Appliance	The original quote bundled the backup appliance with the additional SAN Storage, detailed below. The revised quote is for TWO (2) Barracuda 890 Series Backup Appliances	$0	$34,017	Cybertek_quote_10_09.pdf	4th Quarter 2009
1	$3,449.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): Barracuda Load Balancer	Barracuda Load Balancer Model 430, part of Barracuda Backup System not included in the original estimate.	$0	$3,777	Cybertek_quote_10_09.pdf	4th Quarter 2009
1	$20,000.00	Backup Solution for GIS Server 2(SOM/SOC/DB): SAN Storage SF	Dell Clarion CX3-20 SAN Storage Upgrade (1 Tray = 15 X 1TB). This is storage for data that will be duplicated from GIS Server 2 for the San Francisco location for high availability	$0	$18,348	CSSI_QUOTE_10_09.pdf	4th Quarter 2009
1	$20,000.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): SAN Storage LA	Dell Clarion CX3-20 SAN Storage Upgrade (1 Tray = 15 X 1TB). This is storage for data that will be duplicated from GIS Server 2 for the Los Angeles location for high availability	$0	$18,348	CSSI_QUOTE_10_09.pdf	4th Quarter 2009
1	$5,313.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): Data Offsite Storage	Cost of Data Offsite Storage for GIS Server 2 at $ 512/Terrabyte, now revised for the cost of 1 TB storage offsite quoted from Barracuda	$0	$5,818	Cybertek_quote_10_09.pdf	4th Quarter 2009
7	$3,500.00	GIS Workstation Purchase	Cost of new HP GIS workstations for Associate ISA (2), RPS II (1), RA II (GIS) (2), PURA II (2), originally quoted for GIS Workstation Upgrades	$0	$26,828	HP_QUOTE_GISWKSTN_10_09.pdf	4th Quarter 2009
		TOTAL:		$202,512	$197,464		

Qty.	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested	Corrected Amount (incl. 9.5% Sales Tax)	Source	Purchase Timeline
			Software Costs:				
2	$3,300.00	ArcInfo 9.3.1 Concurrent License Maintenance	Annual license maintenance cost for 2 existing concurrent licenses, now corrected to one primary at $ 3,000, the other secondary at $ 1,098.08)	$6,600	$4,487	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
1	$8,415.00	ArcInfo 9.3.1 Concurrent License	Annual license cost (new) for Associate ISA (Specialist) hire, now corrected to $ 7,295	$8,415	$7,988	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
3	$5,950.00	ArcEditor 9.3.1 Concurrent License	Annual license cost (new) for 2 Research Analyst II (GIS) hires and 1 Public Utilities Regulatory Analyst II hire, now corrected to $ 5,142 each)	$17,850	$16,891	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
6	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	Data Interoperability Extension-for all staff with ArcGIS Desktop products (6 total-corrected at $ 1,836 each)	$12,240	$12,063	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
6	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	3D Analyst Extension-for all staff with ArcGIS Desktop products (6 total-corrected at $ 1,836 each)	$12,240	$12,063	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
6	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	Spatial Analyst Extension-for all staff with ArcGIS Desktop products (6 total-corrected at $ 1,836 each)	$12,240	$12,063	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
6	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	Survey Analyst Extension-for all staff with ArcGIS Desktop products (6 total-corrected at $ 1,836 each)	$12,240	$12,063	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
6	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	Geostatistical Analyst Extension-for all staff with ArcGIS Desktop products (6 total-corrected at $ 1,836 each)	$12,240	$12,063	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009

Qty.	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested	Corrected Amount (Incl 9.5% Sales Tax)	Source	Purchase Timeline
1	$6,372.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	PLTS Foundation Concurrent Use-for Research Program Specialist II/III only corrected to $ 4,332 each	$6,372	$4,744	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
1	$2,040.00	ArcGIS Desktop 9.3.1 Extension Concurrent License (for use with ArcInfo, ArcEditor and ArcGIS Server)	JTX Desktop Concurrent Usefor Research Program Specialist II/III only	$2,040	$2,234	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
2	$1,500.00	ESRI Developer Network Subscriptions	For developing scripts and programming mapping applications for 2 Associate ISAs (Specialist)..	$3,000	$3,285	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
1	$15,000.00	SQL Server 2005 Enterprise License	Server plus 15 CAL pricing for GIS Server 1, now corrected to SQL Server Standard 2008 pricing for 4 processors for GIS Server 1-see below	$15,000	$0	N/A	N/A
1	$17,090.00	ESRI/TeleAtlas Data	ESRI Demographic Data, TeleAtlas Telecommunications Data, now corrected to TeleAtlas Communications Data ONLY at $ 9,000 /year	$17,090	$9,855	ADCI_QUOTE_10_09.pdf	4th Quarter 2009
1	$16,322.00	ArcGIS Server 9.3.1 Enterprise Advance Staging Server License	For GIS Server 2, corrected to reflect correct licensing amount based on ESRI conversation 10/28/2009.	$16,322	$0	N/A	N/A
4	$25,000.00	SQL Server 2005 Enterprise License	Per processor licensing for GIS Server 2, now corrected to SQL Server Standard 2008 pricing for 4 processors for GIS Server 2-see below	$100,000	$0	N/A	N/A
1	$1,000.00	Windows 2003/2008 Server License	For GIS Server 2, corrected as the price is bundled to cost of GIS Server 2, see above.	$1,000	$0	N/A	N/A
4	$6,000.00	SQL Server 2008 Standard License	For GIS Server 1, this is to license all 4 processors with unlimited data connections.	$0	$26,280	MICROSOFT_PRICING_SQLSVR08_10_09.pdf	4th Quarter 2009

Qty	Annual Direct Cost	Description	Justification and Comments	Original Amount Requested	Corrected Amount (incl. 9.5% Sales Tax)	Source	Purchase Timeline
4	$6,000.00	SQL Server 2008 Standard License	For GIS Server 2, this is to license all 4 processors with unlimited data connections.	$0	$26,280	MICROSOFT_PRICING_SQLSVR08_10_09.pdf	4th Quarter 2009
1	$32,643.00	ArcGIS Server 9.3.1 Enterprise Advance Production Server License	For GIS Server 2, corrected to reflect correct licensing amount based on ESRI conversation 10/28/2009.	$0	$35,744	ESRI_QUOTE_ARCGIS_10_09.pdf	4th Quarter 2009
		TOTAL:		**$254,889**	**$198,101**		

			Hardware Costs:				
2	$11,000.00	ArcGIS 9.3.1 Enterprise GIS Servers 1 and 2 Maintenance	Annual Hardware & Software maintenance cost for GIS Servers 1 and 2, corrected to reflect new figures obtained from ESRI at $ 9,150.68 each.	$22,000	$20,040	ESRI_QUOTE _Maintenance_ 10_09.pdf	3rd Quarter 2011
1	$18,000.00	GIS Server 3	ArcGIS Server for Public (Internet) Applications (GIS Server 3). This is a Dell Server in the same class as GIS Servers 1 and 2, for capacity building for the internal web hosting of the online mapping application in year 3. This will be configured as an ArcGIS SOM and will be located in San Francisco.	$18,000	$18,615	Dell_Online_St ore_SERVER_ 10_09.pdf	4th Quarter 2010
1	$11,000.00	ArcGIS 9.3.1 Enterprise GIS Server 3 Maintenance	Annual maintenance cost for GIS Server 3, corrected to reflect new figures obtained from ESRI at $ 9,150.68 each	$11,000	$10,020	ESRI_QUOTE _Maintenance_ 10_09.pdf	3rd Quarter 2011
1	$18,000.00	GIS Server 4	Second ArcGIS Server for Public (Internet) Applications (GIS Server 4). This is a Dell Server in the same class as GIS Servers 1 , 2 and 3 as a failover for the public server. This will be configured as an ArcGIS SOM/SOC and DB and will be located in Los Angeles.	$18,000	$18,615	Dell_Online_St ore_SERVER_ 10_09.pdf	4th Quarter 2010
1	$11,000.00	ArcGIS 9.3.1 Enterprise GIS Server 4 Maintenance	Annual maintenance cost for GIS Server 4, corrected to reflect new figures obtained from ESRI at $ 9,150.68 each	$11,000	$10,020	ESRI_QUOTE _Maintenance_ 10_09.pdf	3rd Quarter 2011
1	$95,000.00	Backup Solution for GIS Server 3	Backup solution offsite, data streaming, backup management with updates and replicated SAN storage, this has been broken down in detail below, reassigned to GIS Server 4	$95,000	$0	N/A	N/A
1	$1,024.00	Data OffSite Storage	Cost of Data OffSite Storage $ 50/100GB About 1TB/yr 1024@ 512/TB, this is broken down in detail below	$1,024	$0	N/A	N/A
2	$2,000.00	GIS SOC Maintenance (GIS Servers 1 and 2) -- MS SQL Server 2008	Annual hardware and software maintenance cost for for the SOC portions of GIS Servers 1 and 2	$4,000	$4,380	MICROSOFT_ PRICING_SQL SVR08_10_09. pdf	4th Quarter 2010
1	$16,000.00	GIS SOC Only Server 1	Server Object Container (SOC) ArcGIS Server for Public GIS applications, complete database server quote with SQL Server 2008 bundled, this will be the SOC for GIS Server 3.	$16,000	$17,520	ESRI_QUOTE _dell_advance d_10_09.pdf	4th Quarter 2010
7	$1,000.00	GIS Workstation Replacements	Cost is calculated for replacement of 7 workstations to accomodate ArcGIS Desktop Products	$7,000	$0	N/A	N/A

1	$50,000.00	GIS Data/Web Applications Outside Hosting	CERES/CalAtlas--Public side of the GIS Broadband Mapping Application (includes hosting, map rendering and tech support)	$50,000	$50,000	CERES/CalAtlas Estimate	1st Quarter 2011
2	$15,533.00	Backup Solution for GIS Server 4: Barracuda Backup Appliance	The original quote bundled the backup appliance with the additional SAN Storage, detailed below. The revised quote is for TWO (2) Barracuda 890 Series Backup Appliances	$0	$34,017	Cybertek_quote_10_09.pdf	4th Quarter 2010
1	$3,449.00	Backup Solution for GIS Server 4: Barracuda Load Balancer	Barracuda Load Balancer Model 430, part of Barracuda Backup System not included in the original estimate.	$0	$3,777	Cybertek_quote_10_09.pdf	4th Quarter 2010
1	$20,000.00	Backup Solution for GIS Server 4: SAN Storage SF	Dell Clarion CX3-20 SAN Storage Upgrade (1 Tray = 15 X 1TB). This is storage for data that will be duplicated from GIS Server 4 for the San Francisco location for high availability	$0	$18,348	CSSI_QUOTE_10_09.pdf	4th Quarter 2010
1	$20,000.00	Backup Solution for GIS Server 2 (SOM/SOC/DB): SAN Storage LA	Dell Clarion CX3-20 SAN Storage Upgrade (1 Tray = 15 X 1TB). This is storage for data that will be duplicated from GIS Server 4 for the Los Angeles location for high availability	$0	$18,348	CSSI_QUOTE_10_09.pdf	4th Quarter 2010
1	$5,313.00	Backup Solution for GIS Server 4: Data Offsite Storage	Cost of Data Offsite Storage for GIS Server 2 at $512/Terrabyte, now revised for the cost of 1 TB storage offsite quoted from Barracuda	$0	$5,818	Cybertek_quote_10_09.pdf	4th Quarter 2010
1	$2,000.00	Backup Solution for GIS Server 2 (Maintenance)	Barracuda Backup Solution for off-site, data streaming backup management with updates. Cost of Barracuda support for appliance bought in Year 1 now revised for the cost of 1 TB storage offsite quoted from Barracuda at $5,313/year.	$2,000	$5,818	Cybertek_quote_10_09.pdf	4th Quarter 2010
1	$20,000.00	Network Upgrade Cost	Bandwidth expansion for new servers, includes additional peripherals for backup appliances and servers, cabling, switches and hubs at $1,500/mo/yr.	$20,000	$19,710	CPUC-IMSD Technology Services Unit Estimate	4th Quarter 2010
		TOTAL:		$275,024	$255,045		

			Software Costs:				
3	$3,300.00	ArcInfo 9.3.1 Concurrent License Maintenance	Annual license maintenance cost for 1 Primary at $ 3,000 each, 2 Secondary Licenses at $ 1,098.08 each	$9,900	$5,690	ESRI_QUOTE _Maintenance_ 10_09.pdf	3rd Quarter 2011
3	$1,000.00	ArcEditor 9.3.1 Concurrent License Maintenance	Annual license maintenance cost for 1 Primary at $ 1,500 each, 2 Secondary Licenses at $ 1,200 each	$3,000	$4,270.50	ESRI_EMAIL_ QUOTE_Maint enance_10_09. pdf	3rd Quarter 2011
2	$1,500.00	ESRI Developer Network Subscriptions	For developing scripts and programming mapping applications for Staff ISA (Specialist), Associate ISA (Specialist).	$3,000	$3,285	ESRI_QUOTE _ARCGIS_10_ 09.pdf	3rd Quarter 2011
1	$17,090.00	ESRI/TeleAtlas Data	ESRI Demographic Data, TeleAtlas Telecommunications Data, now corrected to TeleAtlas Communications Data ONLY at $ 9,000 /year	$13,925	$9,855	ADCI_QUOTE _10_09.pdf	4th Quarter 2010
1	$1,000.00	Windows 2003/2008 Server License	For GIS Server 3/bundled with server cost (see above)	$1,000	$0	N/A	N/A
1	$16,322.00	ArcGIS Server 9.3.1 Enterprise Advance Staging Server License	For GIS Server 4, corrected to reflect correct licensing amount based on ESRI conversation 10/28/2009	$16,322	$0	N/A	N/A
1	$1,000.00	Windows 2003/2008 Server License	For GIS Server 4	$1,000	$0	N/A	N/A
1	$16,322.00	ArcGIS Server 9.3.1 Enterprise Advance Staging Server License	For GIS Server 4, corrected to reflect correct licensing amount based on ESRI conversation 10/28/2009	$16,322	$0	N/A	N/A
4	$6,000.00	SQL Server 2008 Standard License	For GIS Server 4, this is to license all 4 processors with unlimited data connections.	$0	$26,280	MICROSOFT_ PRICING_SQL SVR08_10_09. pdf	4th Quarter 2010
1	$32,643.00	ArcGIS Server 9.3.1 Enterprise Advance Production Server License	For GIS Server 3, corrected to reflect correct licensing amount based on ESRI conversation 10/28/2009.	$0	$35,744	ESRI_QUOTE _ARCGIS_10_ 09.pdf	4th Quarter 2010
1	$32,643.00	ArcGIS Server 9.3.1 Enterprise Advance Production Server License	For GIS Server 4, corrected to reflect correct licensing amount based on ESRI conversation 10/28/2009.	$0	$35,744	ESRI_QUOTE _ARCGIS_10_ 09.pdf	4th Quarter 2010
1	$20,000.00	Parcel Mapping Data	To be paid to the office of the State CIO for maintenance costs	$20,000	$20,000	CPUC Estimate	4th Quarter 2010
		TOTAL:		$84,469	$140,868		

PUBLIC UTILITIES COMMISSION

505 VAN NESS AVENUE

SAN FRANCISCO, CA 94102-3298

October 30, 2009

Joyce F. Brigham
National Institute of Standards of Technology
Grants and agreements Management Division
Bldg. 411, Room B-100
100 Bureau Drive, Mail Stop 1650
Gaithersburg, Maryland 20899-1650

Re: State Broadband Data & Development Grant Program
Award Number 06-05-M09001

Dear Ms. Brigham,

Pursuant to paragraph 10 of the above-captioned Financial Assistance Award, the California Public Utilities Commission (CPUC) submits this letter and associated attachments regarding California's in-kind non-federal funding match.

Attached to this letter is a detailed spreadsheet explaining the valuation for California's proposed in-kind funding match. The required match amount is based on the awarded grant funding to date, $2,343,759.60 which encompasses the first two years of this requested funding under this Grant Program, 2009-2010 and 2010-2011, and $500,000 for the Broadband Planning portion thereof. The required match for this amount would be $585,940. Please note that the attached spreadsheet details this in-kind valuation for the first two years of this Grant Program, consisting of wages, hardware, software, geocoding services, and certain data sets provided to the NTIA. While the value of one of the data sets provided to the NTIA (Updated Broadband Task Force Map) is at least $500,000, we are only applying $88,476 of this value to our amended in-kind contribution, so as to bring the total in-kind contribution to the required 20% of $585,940.

All values are based on current pay scales, invoices, costs, and market conditions. Please contact me should you have any questions.

Sincerely,

Robert Haga
California Public Utilities Commission

Attached:

- Detailed In-Kind Budget

cc:
Anne Neville
Program Director - State Broadband Data and Development Grant Program
National Telecommunications and Information Administration
U.S. Department of Commerce
1401 Constitution Ave, NW, Room 4716
Washington, DC, 20230

Michael Morris, CPUC

Federal Share of Cost		$2,343,759.60	
Recipient Share of Cost		$585,940.00	
Total Estimated Cost		$2,929,700.00	

Hardware Costs	$30,000	$0	$30,000
Software Costs	$33,912	$0	$33,912
Subtotal Hardware and Software Costs	$63,912	$0	$63,912
Personnel Costs	$177,969	$195,836	$373,805
Miscellaneous Costs	$138,223	$10,000	$148,223
GRAND TOTAL			

Total In-Kind	$585,940.00	In-Kind Contribution to be made in grant years 1 and 2

Quantity	Value	Description	Comments	Amount Applied	Subtotals
Hardware Costs:					
1	$30,000.00	GIS Server 1 (SOC/SOM/DB)	First Internal GIS Server exclusively for Broadband Mapping Applications	$30,000.00	$30,000.00
Subtotal for Hardware Costs					$30,000.00
Software Costs:					
2	$7,295.00	ArcInfo 9.3.1 Concurrent License	Annual license cost (new)	$14,590.00	$14,590.00
2	$1,000.00	ArcView 9.3.1 Single Use License	Annual maintenance cost	$2,000.00	$2,000.00
1	$16,322.00	ArcGIS Server 9.3.1 Enterprise Advance Staging Server License	For GIS Server 1	$16,322.00	$16,322.00
1	$1,000.00	Windows 2003/2008 Server License	For GIS Server 1	$1,000.00	$1,000.00
					$17,322.00
Subtotal for Software Costs					$51,234.00
Personnel Costs:					
0.5	$82,725.00	Public Utilities Regulatory Analyst II	GIS Project Analyst: Responsible for QA/QC Broadband data and GIS data analysis. Interface with external broadband data providers	$31,021.88	$31,021.88
0.5	$90,882.00	Public Utilities Regulatory Analyst III	Responsible for legal policy analysis for CPUC regulatory actions	$34,080.75	$34,080.75
0.5	$82,912.00	Research Analyst II (GIS)	GIS Project Analyst: Responsible for QA/QC Broadband data and GIS data analysis. Interface with external broadband data providers	$31,092.00	$31,092.00
0.7	$145,306.00	Project and Program Supervisor, PUC	Supervising, coordinating entire Broadband Mapping project. Interfacing with vendors and Broadband providers. Supervising staff	$76,285.65	$76,285.65
0.05	$146,367.00	CEA III (State Geospatial Information Officer)	Consulting on Parcel Map and Elevation Layers	$5,488.76	$5,488.76
Subtotal for Personnel Costs					$177,969.04
Miscellaneous Costs:					
1	$10,000.00	CalAtlas Geocoding	Value of geocoding preformed by CalAtlas	$10,000.00	$10,000.00
1	$500,000.00	Updated BBTF Map	Cost of Statewide Online Map Developed by the California Broadband Task Force in 2006, Subsequently Updated by the CPUC	$88,476.00	$78,223.00
1	$50,000.00	California Parcel Map	Statewide map created from data collected from various state organizations	$50,000.00	$50,000.00
Subtotal for Miscellaneous Costs					$138,223.00

Quantity	Value	Description	Comment	Amount Applied	Subtotals
			Hardware Costs:		
		Subtotal for Hardware Costs:			$0.00
			Software Costs:		
		Subtotal for Software Costs:			$0.00
			Personnel Costs:		
0.5	$82,725.00	Public Utilities Regulatory Analyst II	GIS Project Analyst: Responsible for QA/QC Broadband data and GIS data analysis. Interface with external broadband data providers	$41,362.50	$41,362.50
0.5	$90,882.00	Public Utilities Regulatory Analyst III	Responsible for legal policy analysis for CPUC regulatory actions	$45,441.00	$45,441.00
0.7	$145,306.00	Project and Program Supervisor, PUC	Supervising, coordinating entire Broadband Mapping project. Interfacing with vendors and Broadband providers. Supervising staff	$101,714.20	$101,714.20
0.05	$146,367.00	CEA III (State Geospatial Information Officer)	Consulting on Parcel Map and Elevation Layers	$7,318.35	$7,318.35
		Subtotal for Personnel Costs:			$195,836.05
			Miscellaneous Costs:		
1	$10,000.00	CalAtlas Geocoding	Value of geocoding preformed by CalAtlas	$10,000.00	$10,000.00
		Subtotal for Miscellaneous Costs:			$10,000.00

GOVERNOR ARNOLD SCHWARZENEGGER

July 21, 2009

Mr. Larry Strickling
Administrator
National Telecommunications and Information Administration
1401 Constitution Ave., N.W.
Washington, DC 20230

RE: Letter of State Designation for California

Dear Mr. Strickling,

The Broadband Data Improvement Act (BDIA), Title I of Public Law No. 110-385, 122 Stat. 4096 (Oct. 10, 2008), requires a letter of state designation affirming that the California Public Utilities Commission is the single entity in California eligible to receive a grant under this Program.

On July 1, 2009, the National Telecommunications and Information Administration (NTIA) issued a Notice of Fund Availability (NOFA) for State Broadband Mapping Grant in Docket No. 0660-ZA29. The NOFA reiterates the BDIA requirement for a letter of state designation.

As Governor of the State of California, I do hereby designate the California Public Utilities Commission (CPUC), an agency of the state, as the authorized designee for mapping broadband availability in California. Let this letter stand as certification that the CPUC is the single eligible entity for California that has been designated by the state to receive a grant under Section 106(i)(2)(B) of the BDIA.

Thank you for your attention to this matter.

Sincerely,

Arnold Schwarzenegger

cc: California Public Utilities Commission President Michael R. Peevey
    California Chief Information Officer Teri Takai
    Federal Communications Commission Chairman Julius Genachowski

STATE CAPITOL • SACRAMENTO, CALIFORNIA 95814 • (916) 445-2841