

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.

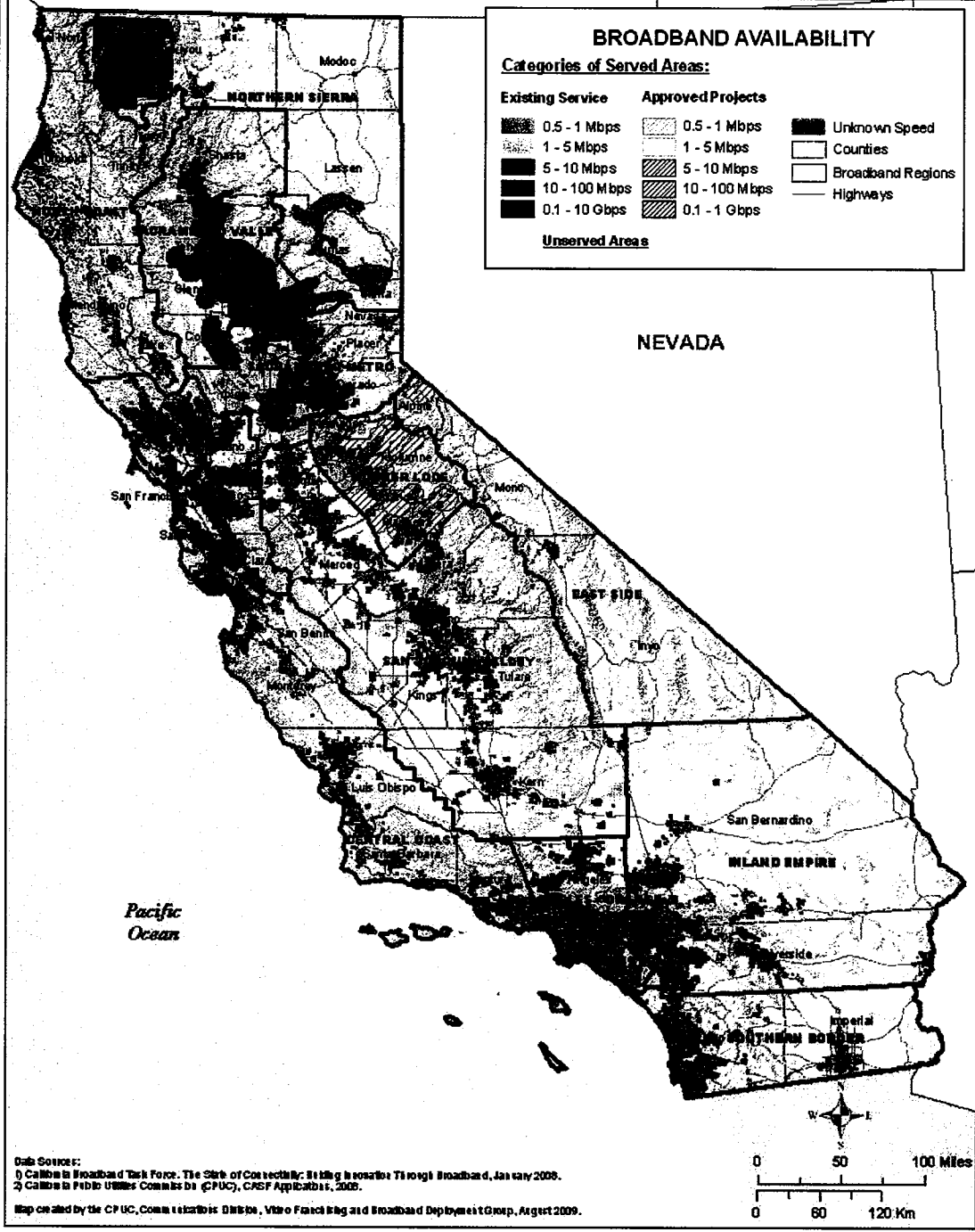
While the CPUC will adopt the NOFA's definition of unserved and underserved for purposes of our obligations under the NOFA and BDIA, this map reflects the definition of unserved used by the Commission and the Task Force at the time this map was created. Unserved, under this definition, means areas where 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



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.

QA/QC process

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.

Geocoding Process

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

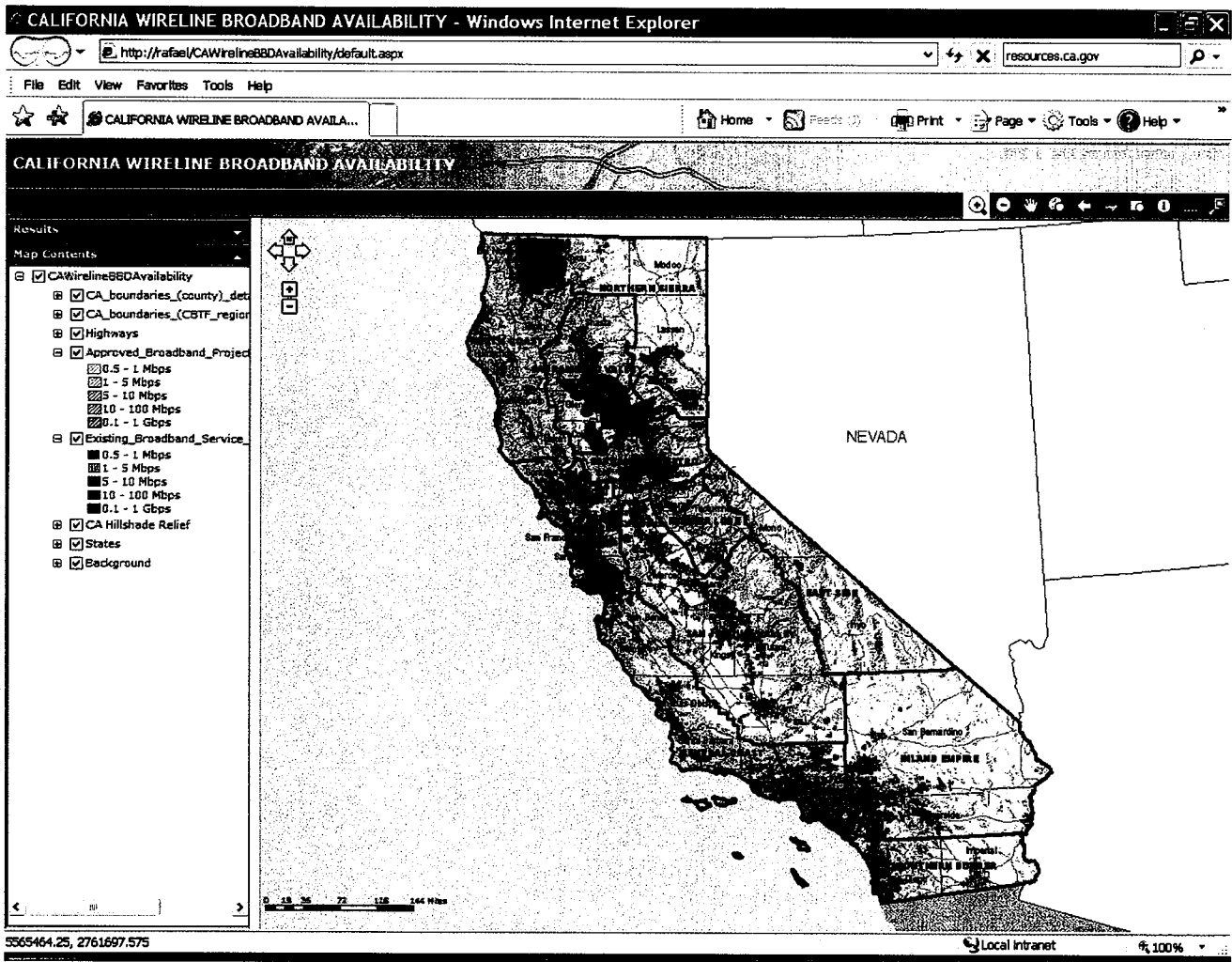
California intends for the state-wide inventory map to be fully interactive in order to optimize utilization of the broadband data contained therein. Interactive maps provide many opportunities for distributing broadband information to the public via the Internet. They provide a highly scalable framework 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.

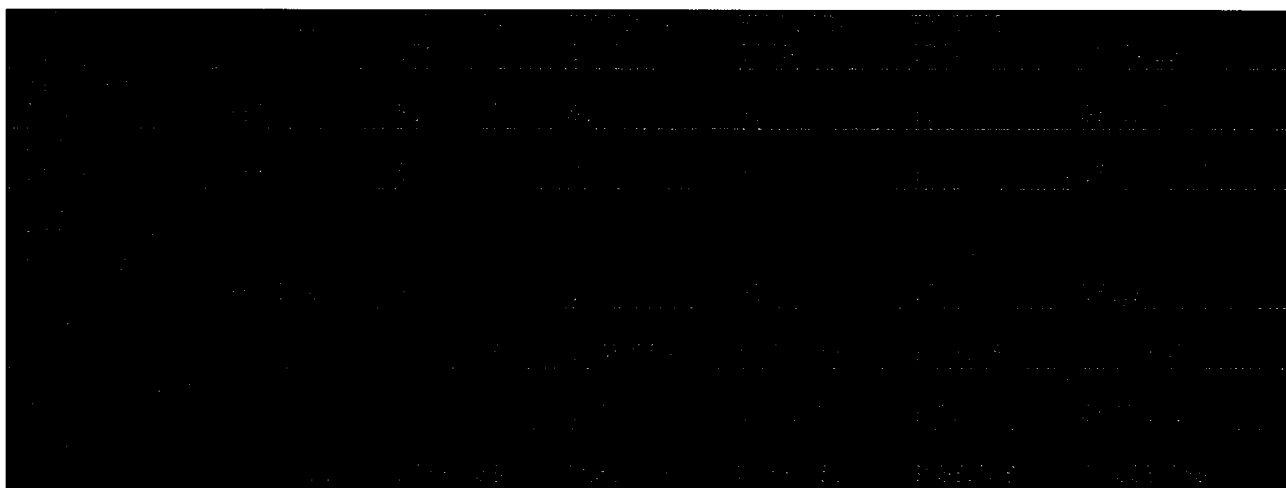
Geocoding – As discussed above, the CPUC intends to utilize the services of CalAtlas in order to geocode all of the data submitted to us by broadband service providers under this program. Further, for the first two years of this program, the CPUC intends to use CalAtlas servers to store geocoded data 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.

