

RECIPIENT NAME:ZERODIVIDE

AWARD NUMBER: 06-43-B10538

DATE: 02/28/2013

OMB CONTROL NUMBER: 0660-0037

EXPIRATION DATE: 12/31/2013

### ANNUAL PERFORMANCE PROGRESS REPORT FOR SUSTAINABLE BROADBAND ADOPTION

#### General Information

<b>1. Federal Agency and Organizational Element to Which Report is Submitted</b> Department of Commerce, National Telecommunications and Information Administration	<b>2. Award Identification Number</b> 06-43-B10538	<b>3. DUNS Number</b> 829939854
<b>4. Recipient Organization</b> ZERODIVIDE 425 BUSH ST STE 300, San Francisco, CA 941083721		
<b>5. Current Reporting Period End Date (MM/DD/YYYY)</b> 12-31-2012	<b>6. Is this the last Annual Report of the Award Period?</b> <input type="radio"/> Yes <input checked="" type="radio"/> No	
<b>7. Certification: I certify to the best of my knowledge and belief that this report is correct and complete for performance of activities for the purposes set forth in the award documents.</b>		
<b>7a. Typed or Printed Name and Title of Certifying Official</b>  David Veneziano	<b>7c. Telephone (area code, number and extension)</b>	
	<b>7d. Email Address</b>  david@zerodivide.org	
<b>7b. Signature of Certifying Official</b>  Submitted Electronically	<b>7e. Date Report Submitted (MM/DD/YYYY):</b>  02-28-2013	

**PROJECT INDICATORS**

**1. Does your Sustainable Broadband Adoption (SBA) project foster a particular broadband technology or technologies? If so, please describe this technology (or technologies) (600 words or less).**

ZeroDivide's Tribal Digital Village Broadband Adoption Program was designed to increase broadband adoption from the 17% baseline usage to 70% (4800 new broadband users) among members of 19 Native American tribes in rural Southern California. This will be accomplished through outreach and public awareness, digital literacy training, content creation and establishment of a sustainable business model that provide broadband connectivity for area residents. The Tribal Digital Village Shadow project will train and mentor community youth to deploy and operate the TDV wireless broadband network as part of this effort.

Since its inception 2001, TDV implement the ground work to support key community operations on reservations, and created over 350 miles of point-to-point and point-to-multi-point links supporting 86 tribal buildings such as tribal administration buildings, EPA departments, fire stations, law enforcement, libraries, schools and Head Start programs.

On the tribal lands, there are limited affordable choices for access to broadband speeds found in other communities. This is due, in part, to the mountainous terrain and communities that are located in extremely remote rural settings. There are no terrestrial broadband services available to fifteen of 17 reservations served by TDV. Two of the reservations are located adjacent to a broadband service, but it is cost-prohibitive and does not deliver adequate speeds. TDV's goals include providing residents access to speeds up to 5 Mbps. The current configuration for TDV's system includes fixed broadband wireless point-to-point, and point-to-multi-point connections, using 2.4Ghz, 5.3 Ghz, 5.8 Ghz and FCC licensed spectrum. The TDV data center has a fiber-termination point, currently serving 250 Mbps.

**2a. Please list all of the broadband equipment and/or supplies you have purchased during the most recent calendar year using BTOP grant funds or other (matching) funds, including any customer premises equipment or end-user devices. If additional space is needed, please attach a list of equipment and/or supplies. Please also describe how the equipment and supplies have been deployed (100 words or less).**

Manufacturer	Item	Unit Cost per Item	Number of Units	Narrative description of how the equipment and supplies were deployed
n/a	n/a	0	0	n/a
<b>Totals</b>		0	0	

Add Equipment

Remove Equipment

**2b. To the extent you distribute equipment/supplies to beneficiaries of your project, please describe the equipment/supplies you distribute, the quantities distributed, and the specific populations to whom the equipment/supplies are distributed (600 words or less).**

As part of its Broadband Awareness and Training activities, TDV initiated an iPad/iPod give-away raffle program as an incentive for attendance and completion of training. As of December 2012 TDV had distributed 2 iPads to tribal residents for personal/business use.

**3. For SBA access and training provided with BTOP grant funds, please provide the information below. Unless otherwise indicated in the instructions, figures should be reported cumulatively from award inception to the end of the most recent calendar year. For each type of training (other than open access), please count only the participants who completed the course.**

Types of Access or Training	Number of People Targeted	Number of People Participating	Total Training Hours Offered
Open Lab Access	24,000	22,800	0
Multimedia	18	21	26
Office Skills	0	94	94
ESL	0	0	0
GED	0	0	0
College Preparatory Training	0	94	94
Basic Internet and Computer Use	0	94	94
Certified Training Programs	0	0	0
Other (please specify): Broadband Awareness Meetings	150	192	192
<b>Total</b>	24,168	23,295	500

**4. Please describe key economic and social successes of your project during the past year, and why you believe the project is successful thus far (600 words or less).**

This year, a key success for the Tribal Digital Village Project has been the introduction of combined wind and solar power as a means to power broadband transmission towers located on the remote mountain tops. This innovation, along with efforts to increase bandwidth capacity has resulted in more consistent and expanded service for residents. As a result, TDV has been able to enhance its reputation and visibility among residents as a provider of quality services which turn has led to the strengthening customer base for the enterprise.

**5. Please estimate the level of broadband adoption in the community(ies) and/or area(s) your project serves, explain your methodology for estimating the level of broadband adoption, and explain changes in the broadband adoption level, if any, since the project began.**

<p><b>5a. Adoption Level (%):</b></p>	<p><b>Narrative description of level, methodology, and change from the level at project inception (600 words or less).</b></p>
<p>17</p>	<p>A subscriber baseline for the target population was established by utilizing the number of broadband subscribers to TDV's residential wireless broadband service, and the number of broadband subscribers utilizing other broadband services. Data is collected and managed through a customer service database that track home, anchor institution and business subscriptions. In addition TDV monitors traffic to its website, surveys broadband technology skills as a result of trainings and tracks use of broadband at community anchor institutions through sign up sheets.</p>

**6. Please describe the two most common barriers to broadband adoption that you have experienced this year in connection with your project. What steps did you take to address them (600 words or less)?**

Over the past year, one of most common barriers for TDV is its struggle to keep up with demand for subscription deployment. As a result, they lose potential subscribers to consumer satellite services and 3G modem services from cell phone providers. In many cases, even when TDV's broadband awareness campaign was on schedule, they find themselves unable to serve communities because of the lack of distribution tower upgrades, solar power units, bandwidth capacity, and distribution access points. This has been an ongoing struggle over the life of the project and stems from the lack of anticipated BIP funding to supplement BTOP funding.

BIP funds would have made possible the necessary infrastructure upgrades to the network and would have helped accelerate subscriptions to member homes and businesses. In light of this ongoing constraint, and the desire to continue to reach more remote and underserved areas, TDV continues to retool and adjust its broadband awareness trainings in order to increase adoption rates. As an additional measure, TDV along with ZeroDivide continue exploring avenues for private, state and federal funds to address this infrastructure issue.

Another significant barrier to broadband adoption has been the extreme weather conditions. During the early fall, northern San Diego County is susceptible to high winds and temperature in its remote mountaintop areas. This combination of factors makes for wildfire conditions in proximity to TDV towers and power generating equipment. In the past, the TDV network has suffered losses to its critical infrastructure due to unpredictable fires. As the season progresses towards winter, severe storm activity also moves through these areas and can wash out dirt roads and trails that provide access to tower sites. These kinds of events can create havoc for the installation, maintenance and upgrading of the TDV broadband infrastructure. For example, in Q3 2012 a thunderstorm with massive electrical activity cause damaged to equipment that led to 11 homes being without broadband services for a period of time.

**7. To the extent that you have made any subcontracts or sub grants, please provide the number of subcontracts or sub grants that have been made to socially and economically disadvantaged small business (SDB) concerns as defined by section 8(a) of the Small Business Act, 15 U.S.C. 647, as modified by NTIA's adoption of an alternative small business size standard for use in BTOP. Please also provide the names of these SDB entities. (150 words or less)**

N/A

**8. Please describe any best practices / lessons learned that can be shared with other similar BTOP projects (900 words or less).**

BTOP project staff should consider utilizing existing social and community gatherings as venues to conduct education and engagement activities. This approach requires work with regard to establishing and sustaining viable partnerships in the community but lends itself to a more fully integrated community support and adoption of broadband strategies. For example, late in the year, TDV was able to establish a partnership with two local area schools that will participate in the TDV Shadow Project. This arrangement has grown through connection and trust built through participation in community events.