

TOBACCO SETTLEMENT REVENUE OVERSIGHT COMMITTEE

TOBACCO SETTLEMENT REVENUE (TSR) FUNDING REQUEST

Name of entity requesting TSR funds: _____New Mexico State University_____

Name(s) of each program for which TSR funds will be used:Dept Geography Research Mapping to
Increase Physical Activity

Description of each program, including its purpose: __Please see attached_____
____Please see attached_____

Have you requested TSR funds prior to this request? Yes (No)

Have you received TSR funds prior to this request? Ye (No)

If yes, in what fiscal years? _____

What will you use the requested funds for? Please include goals and objectives.

____Please See Attached_____

Is this a change from previous years' use? Yes (No)

If yes, please describe the change and reason(s): _____

Amount requested (Total amount, and amount for each program):

____\$133,483_____

What other sources of funding are applied to this purpose?

Name, title, telephone, email and mailing address of contact person:

____Vicente Vargas, Director, State Goverment, 505-710-8560, v_vargas@nmsu.edu_____

Date: _____11.15.16_____

COVER PAGE FOR NM TOBACCO SETTLEMENT GRANT APPLICATION

Project Title: Exploration of the built environment of Dona Ana County to promote healthy lifestyles in the region.

Principal Investigator

- Christopher Brown NMSU Department of Geography

Co: Principal Investigator(s)

- Christina Medina NMSU Department of Government
- Ernesto Morales NMSU Department of Public Health

Total Budget requested: \$133,483

Period of Performance: 1 July 2017-31 December 2018

Project Summary

Increasing physical activity on a regular basis and also reducing sedentary behavior are both linked to a range of positive health outcomes; these include reduced morbidity and mortality, decreased likelihood of becoming disabled, and living a longer and fuller life (PdNHF 2015, HEAL Strategic Plan). Using transportation outside of private passenger automobiles (PPA) to get to and from work, school, shopping, and cultural activities helps increase physical activity and reduce sedentary activity. Such means of transportation include the use of public transit¹ and walking and riding a bicycle to meet our daily transportation needs. However, limitations in transportation facilities, a lack of knowledge of members of society about these facilities, and a lack of familiarity and comfort in doing so, impair the ability of people to engage in these activities with positive impact on health outcomes.

In the project we propose, we seek to engage community members and transportation and community planning experts to identify and map existing transportation facilities and also unmet transportation needs. With these data in hand, we propose to deploy geographic information system (GIS) tools to map the major locations of people living in Dona Ana County (DAC), their most common destinations (including recreational facilities), and networks of existing bicycle, transit, and pedestrian facilities to identify gaps in the region's multi-modal transportation network. We would also incorporate equestrian and off road trail facilities as active recreational elements that people can utilize to increase their physical activity. The end result we propose to build is a GIS map of what we are referring to as the **Dona Ana County's Mobility Capability Network**, and we propose to serve information about this network through the use of online mapping tools. The Web portal we would build would also include information to help promote healthy lifestyles through increased use of transportation outside of private passenger automobiles and active recreation activities on the network. In the latter part of the project, we develop concrete, evidence based policy suggestions to improve this network and lessen or eliminate these gaps. We would then engage community groups, relevant agency staff, and policy makers to move these ideas forward.

Project track – The project we propose fits the Public Health Programs and Needs track.

¹ Results of the National Household Travel Survey were cited in an article by Besser and Dannenberg (2005), indicating that the median time that regular transit riders spend walking was 19 minutes per day, and 29% of survey respondents increased their daily physical activity by over 30 minutes per day.

Specific Aims of the project

The ultimate aim of this project is to provide the information needed to increase the use of non-PPA means to meet the daily transportation needs of the citizens of Doña Ana County. By doing so, we are confident that physical activity of the County's residents will increase, sedentary behavior will decrease, behavior-driven mortality and morbidity will decrease, and the quality of life of the County's residents will increase. The sub-aims of this project are several, and these include mapping the landscape of both transportation needs and facilities, identifying gaps in the network of facilities, developing policy initiatives that can fill the gaps, and increasing the knowledge of people in the County about the non-PPA options that exist in Doña Ana County (DAC). Specific outcomes of the project include GIS maps of transportation needs and facilities, a GIS map of the **Dona Ana County's Mobility Capability Network**, a Web portal by which these maps and related information about how to safely take advantage of non-PPA transportation are served to the public, and specific actionable policy initiatives that local governmental agencies can advance to increase both the amount of non-PP transportation options, and the comfort and safety zones of people using these options. These outcomes then close the loop on project activities by increasing the range of non-PPA transportation options, provide an increased awareness of these options on the public's part, and the desirable increase in healthy lifestyle at local governmental agencies can advance to increase both the amount of non-PP transportation options, and the comfort and safety zones of people using these options. These outcomes then close the loop on project activities by increasing the range of non-PPA transportation options, provide an increased awareness of these options on the public's part, and the desirable increase in healthy lifestyle behaviors, decreased mortality and morbidity, and increased quality of life.

Project Strategy²

Approach – The work that we propose is in four related areas, initial outreach, GIS analysis, public policy analysis, and re-engagement of community groups and relevant agencies.

Initial outreach - We seek to identify community transportation needs and gaps in existing facilities that impair mobility outside the use of private passenger automobiles. This will involve working with several citizen's groups and relevant government agencies to gather place-specific community input through a combination of focus groups, surveys, and participant observation. Citizens groups would include Dona Ana Communities United, and bicycle, trail, social justice, and equestrian advocacy groups; governmental agencies include NMDOT, City of Las Cruces, Mesilla Valley Metropolitan Planning Organization (MVMPO), and LCPS's Safe Routes To School program. Ms. Kari Bachman with Dona Ana Communities United will work with project Principal Investigator (PI) Christopher Brown to coordinate this outreach and engagement effort, and we note a professional services agreement in the budget to cover this.

GIS Analysis - The goal of this analysis is to build a GIS-based map of Dona Ana County's Mobility Capability network, and this will include all bicycle, pedestrian, equestrian, and transit facilities. Project PI Brown will be lead on this effort, working with staff in NMSU's Spatial Applications Research Center to advance this work. In preliminary research we conducted as we prepared this proposal, we have discovered several ongoing efforts that will be helpful to include in this mapping work, and these include the MVMPO's Bicycle Suitability Map, efforts of the Southern New Mexico Trail Alliance to map non-motorized trails in DAC, and the system of ditch roads and trails that Elephant Butte Irrigation District maintains. Through the use of GIS tools, project staff will map destinations and origins of people, relevant transportation networks, and the gaps that exist. The last step of this mapping work is to develop a Web portal from which this map can be served using the ArcGIS Online mapping tool that we successfully deployed.

Policy analysis – Once the above map is created and vetted with community groups and transportation and community development planners that we engaged in the early work of the project, Christina Medina in NMSU's Government Department and Ernesto Morales in the NMSU Department of Public Health will lead the

² I reversed the order of the three topics covered in this section, as the case for innovation and significance is much easier to make once the approach and methods are discussed.

work to develop evidence based policy ideas that would help move actionable ideas to “fill in the gaps on the map” forward. Specific outcomes of this work include a policy brief that provides detail on specific, concrete policy actions that would help eliminate the gaps that we identify. Examples of these ideas include model ordinances for regional governments to pass that would advance work to fill in the gaps, the development of a Mobility Navigator program that would help people learn about non-PPA transportation options and recreational opportunities, and partnerships among governmental agencies and NGO groups interested in promoting these efforts. We would then share this policy brief with key decision makers and agency staff, with the specific intent of informing policy makers on these concrete actions that will reduce barriers and gaps in the Dona Ana County’s Mobility Capability network and facilitate healthier lifestyles and a better quality of life.

Re-engaging community groups and relevant agencies – The final step in the project would be to “close the loop” with community groups and agencies with whom we engaged at the beginning of the project. Specific steps involved in this would be the discussions with the NGOs and agencies noted above and also meeting with the various community groups that have worked with us on the project, with the intent to share project outcomes that can support people to engage in healthier behaviors outside of the use of PPAs to meet their transportation and recreation needs. In doing so, we would utilize the Web portal discussed above to share the range of transportation options identified in the mapping work, the policy ideas developed in the policy analysis, and a range of public educational material detailing how to safely utilize non-PPA to meet daily transportation needs and engage in healthy recreational activities.

Innovation – By its very nature, the work we propose directly challenges the current paradigm by which people rely very heavily on PPA to meet their transportation needs. The project does so by mapping origins and destinations of people needed to get around the region, the existing transportation linkages that exist, the gaps that exist, and well informed policy ideas to reduce barriers and gaps uncovered. The manner by which these outcomes are shared would be the Web portal that we have described above that would be accessible to members of the public from mobile devices. The value of this is demonstrated by the manner by which people rely more and more on mobile mapping apps to find their way to various destinations, as opposed to paper maps on which people relied prior to the development of mobile mapping apps. Interested members of the public could find out how best to get around the county via non-PPA means. By accessing the Web portal from mobile devices, this information would be “at one’s fingertips,” not locked up in a paper map or document published by a relevant government agency.

Significance – The work we propose has the potential to support healthier lifestyles and a higher quality of life of DAC residents, two of the major goals of public health research and outreach efforts. Firstly, due to our partnership with the Safe Routes to School (SRTS) Program, we will be working with LCPS staff involved in the SRTS program, school staff that participate in SRTS program, and the children attending SRTS schools to educate them about the benefits of walking and riding bicycles to school, relevant facilities that they need to utilize to do so, and how to get to and from school safely. These efforts would increase the number of children that are physically active and get them started on developing a healthy oriented mindset and lifestyle. Secondly, project outcomes would decrease the number of adults reporting no leisure time physical activity. The foci of this project are to map the DAC Mobility Capability Network, identify needs for improvements to non-private passenger automobile transportation facilities, develop ways to meet these needs, develop educational and outreach materials to promote these goals, and help advance evidence based policy to support the entire effort. All of these activities seek to educate people about non-PPA transportation options, motivate them to take advantage of healthy lifestyle options, and help advance the policy that can make these things happen. Thirdly, results of this project can inform modification of the built environment to promote public health. Current research into the manner by which the built environment impacts public health identifies the “fittest and least fit cities in the US,” and indirectly, identifies cities that are likely to support healthier lifestyles. Specifically, the American College of Sports Medicine did such a study; relevant variables that exist within the fittest cities include options for outdoor exercise (like walking and riding a bike to meet daily transportation needs), easier access to parks and paths for jogging, walking and biking, and a lower level of barriers to these activities. The outcomes of our proposed work will directly support the enhancement of our built environment in a manner that moves us towards the fittest cities and the positive public health outcomes these cities enjoy.

NM TOBACCO SETTLEMENT APPLICATION BUDGET TEMPLATE

Principal Investigator: Brown, Christopher Paul.

PERSONNEL		Months Devoted to Project			DOLLAR AMOUNT REQUESTED (INCLUDING F&A)		
NAME	ROLE ON PROJECT	Cal. Mnths	Acad. Mnths	Summer Mnths			
Christopher Brown	PI			1.5	\$19,947		
Christina Medina	Co-PI			1.5	\$20,985		
Ernesto Morales	Health outreach			1.5	\$19,962		
Hugo Rojas Villalobos	GIS coordinator		2.0		\$10,420		
TBD – acad. year at .50 FTE, summer at 1.0 FTE	GA GIS specialist		9	3	\$40,169		
SUBTOTALS					\$111,483		\$111,483
EQUIPMENT - computer usage fees, 1500 hours at \$3/hour = \$4,500							\$4,500
SUPPLIES							0
TRAVEL – support for workshops, focus groups, and related outreach efforts							\$2,500
OTHER EXPENSES							
PSA to Doña Ana Communities United to facilitate outreach efforts = \$10,000							
Translation services to translate Web portal and outreach materials = \$5,000							\$15,000
TOTAL BUDGET							\$ \$133,483

Budget justification

Faculty salary – Project will involve active faculty participation by Brown, Medina, and Moralez, and the salary requested is consistent with faculty salary requested in similar projects.

Graduate student salary –Project will require data compilation & analysis, fieldwork, GIS analysis, map production, & Website construction/population. Time allocated is consistent with projects of this nature. **SpARC**

Lab Coordinator salary –Project will involve setting up working environment, training/supervising staff, QA/QC, and project reporting. Budget is consistent with previous projects of this nature.

Travel –Project will involve fieldwork to work with community groups and agency staff, and the expenses we estimate are consistent with similar projects of this type and NMSU's travel rates.

Computer time –Project will require use of desktop computers, storage and back up of datasets on SpARC server, and special purpose software.

Translation services funds we request for translation services will insure that these people are able to participate in meetings and engage with project staff. The funds requested are consistent with funds requested to pay for these services in similar projects.