

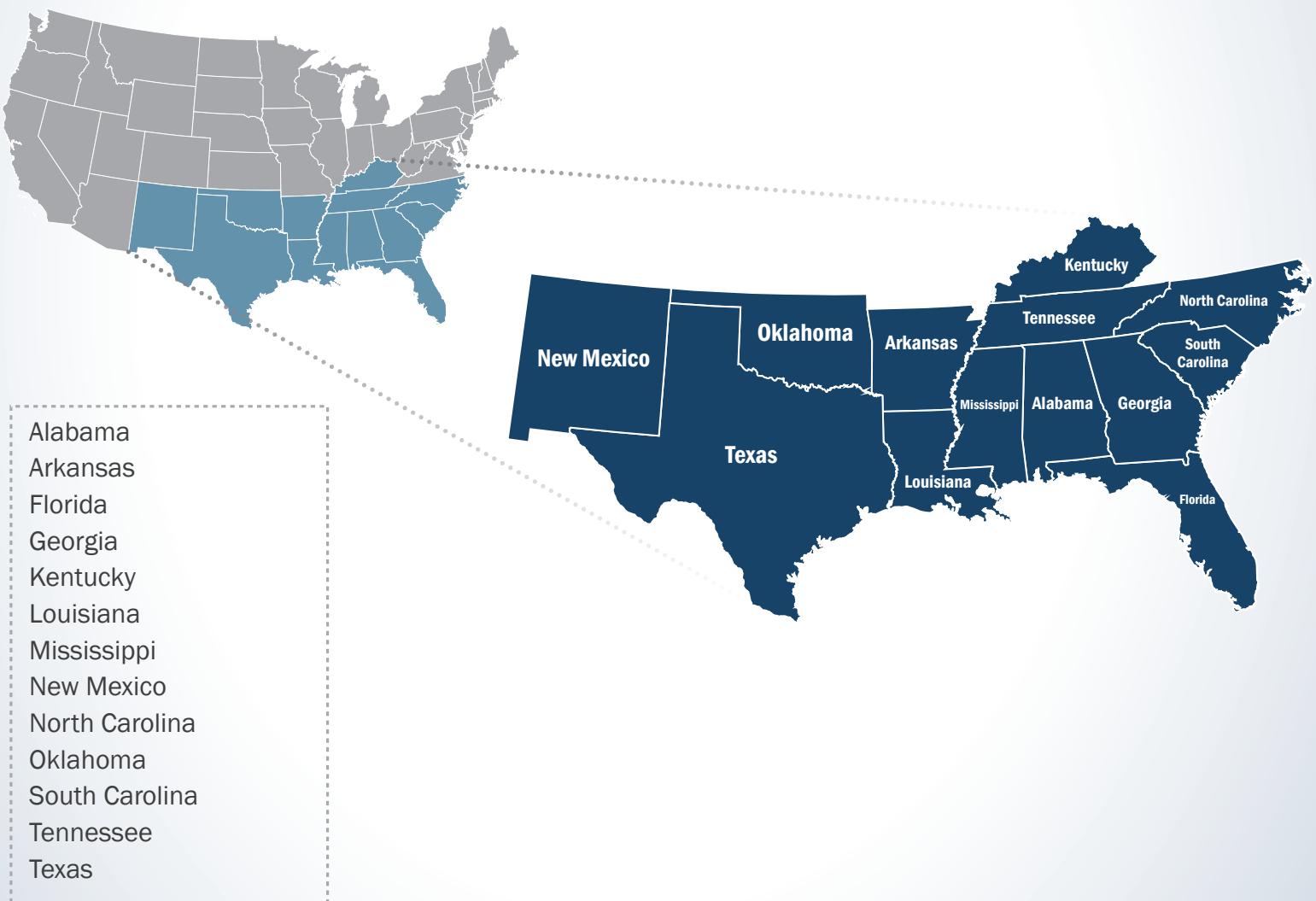


# Nationwide Public Safety Broadband Network

## Draft Programmatic Environmental Impact Statement

### for the Southern United States

**VOLUME 14 - APPENDIX B**



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# First Responder Network Authority



Nationwide Public Safety Broadband Network

## **Draft Programmatic Environmental Impact Statement for the Southern United States**

### **VOLUME 14 - APPENDIX B**

Amanda Goebel Pereira, AICP  
NEPA Coordinator  
First Responder Network Authority  
U.S. Department of Commerce  
12201 Sunrise Valley Dr. M/S 243  
Reston, VA 20192

#### **Cooperating Agencies**

Federal Communications Commission  
General Services Administration  
U.S. Department of Agriculture—Rural Utilities Service  
U.S. Department of Agriculture—U.S. Forest Service  
U.S. Department of Agriculture—Natural Resource Conservation Service  
U.S. Department of Defense—Department of the Air Force  
U.S. Department of Energy  
U.S. Department of Homeland Security

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## **First Responder Network Authority Nationwide Public Safety Broadband Network Programmatic Environmental Impact Statement**

### **Scoping Summary Report**

#### *Overview*

The First Responder Network Authority (FirstNet), an independent authority within the Department of Commerce (DOC), is preparing five regional Programmatic Environmental Impact Statements (PEIS) to evaluate the potential impacts of establishing of a nationwide, interoperable, public safety broadband network (NPSBN) based on a single national network architecture. Title VI of the Middle Class Tax Relief and Job Creation Act of 2012 (Public Law No. 112-96, 126 Stat. 156 (codified at 47 U.S.C. 1401 *et seq.*) charges FirstNet with taking all actions necessary to ensure the building, deployment, and operation of NPSBN, by, at a minimum:

- Ensuring nationwide standards for use and access to the network;
- Issuing open, transparent, and competitive requests for proposals to the private sector;
- Encouraging use of existing commercial wireless infrastructure to speed deployment; and
- Managing and overseeing the implementation and execution of contracts or agreements with non-Federal entities to build, operate, and maintain the network.

FirstNet has determined that a PEIS is the appropriate level of environmental review under the National Environmental Policy Act of 1969 (NEPA). FirstNet will use the NEPA planning process to encourage agency and public involvement in the review of the proposed projects. Public involvement allows for full and fair discussion of the project scope and potential environmental impacts. By providing a means for open communication between FirstNet and the public, the procedural aspects of NEPA promote better decision-making.

The Council of Environmental Quality (CEQ) regulations (40 Code of Federal Regulation [CFR] Parts 1500-1508) provide guidance on opportunities for public participation. This report provides an overview of the FirstNet PEIS scoping activities, including the public scoping meetings and comments received during the comment period.

#### *Public Notification*

On November 12, 2014, FirstNet published a Notice of Intent (NOI) in the *Federal Register* to initiate a 45-day scoping comment period (79 Federal Register [FR] 67156). The NOI, provided in **Appendix A**, identified that FirstNet would be developing regional PEISs and solicited input from the public on potential concerns associated with the Proposed Action and purpose and need, and provided background information on the project. The NOI also included an announcement of PEIS scoping meetings. Issuance of the NOI commenced a 45-day public scoping period that ended on December 29, 2014.

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FirstNet placed advertisements in local newspapers to invite the public to the scoping meetings identifying the dates and locations. Publication of the notices occurred in the following papers:

- Washington Post and Washington Post Express (November 23, 2014)
- Honolulu Star-Advertiser (November 30, 2014)
- San Francisco Chronicle (November 30, 2014)
- Arizona Republic and Arizona Daily Star (November 30, 2014)
- Kansas City Star (December 7, 2014)
- The Times-Picayune (December 7, 2014)
- New York Times (December 14, 2014)

Copies of the newspaper notices are included in **Appendix B**.

### *Scoping Meetings*

FirstNet held seven in-person scoping meetings throughout the nation. These meetings provided the general public and interested stakeholders opportunities to learn about the proposed action, talk directly with FirstNet environmental staff, and provide input regarding the scope of the analysis and alternatives. Organized as informal gatherings, the scoping meetings provided the public with an opportunity to learn about FirstNet, alternative ways to implement the NPSBN that will be analyzed in the PEISs, and the overall NEPA process, as well as provide comments and input to the FirstNet team. FirstNet held scoping meetings at the following locations:

- *Washington, D.C.* - Tuesday, November 25, 2014; 4-8 p.m.  
Department of Commerce lobby, 1401 Constitution Avenue NW, Washington, DC 20230
- *Honolulu, HI* - Tuesday, December 2, 2014; 4-8 p.m.  
Neal Blaisdell Center, 777 Ward Avenue, Honolulu, HI 96814
- *San Francisco, CA* - Thursday, December 4, 2014; 4-8 p.m.  
Holiday Inn Civic Center, 50 Eighth Street, San Francisco, CA 94103
- *Tucson, AZ* - Thursday, December 4, 2014; 4-8 p.m.  
Embassy Suites – Williams Center, 5335 E. Broadway Boulevard, Tucson, AZ 85711
- *Kansas City, MO* - Tuesday, December 9, 2014; 4-8 p.m.  
Kansas City University of Medicine and Biosciences, Classroom Annex Building, Classroom A, 1750 East Independence Avenue, Kansas City, MO 64106
- *New Orleans, LA* - Thursday, December 11, 2014; 5-9 p.m.  
Loyola University, Thomas Hall, 6363 St. Charles Avenue, New Orleans, LA 70118
- *New York, NY* - Monday, December 15, 2014; 4-8 p.m.  
New York University, Kimmel Center Grand Hall, 60 Washington Square South, New York, NY 10012

Each scoping meeting included a poster session that allowed individuals to review posters describing the proposed action, purpose and need, alternatives considered, geographic scope, and the NEPA process. The posters and handouts provided at the meetings are included in **Appendix C**. At each meeting, attendees could fill out a comment card and sign up for the distribution list.

Attendance lists from the meetings are included in **Appendix D**. A total of 19 people attended the seven scoping meetings. FirstNet received written comments from 48 individuals and organizations (one commenter submitted two comments). Table 1 provides the breakdown of comments received for each meeting and during the scoping comment period. Comments received both via U.S. Postal Service mail and electronically (email) were counted once as U.S. Postal Service.

**Table 1. Summary of Scoping Period Comments Received**

Comment Format	Number
<b>Scoping Meetings</b>	
<b>November 25, 2014 (Washington, DC)</b>	
Attendees	6
Written Comments	0
<b>December 2, 2014 (Honolulu, HI)</b>	
Attendees	0
Written Comments	0
<b>December 4, 2014 (San Francisco, CA)</b>	
Attendees	0
Written Comments	0
<b>December 4, 2014 (Tucson, AZ)</b>	
Attendees	2
Written Comments	0
<b>December 9, 2014 (Kansas City, MO)</b>	
Attendees	3
Written Comments	0
<b>December 11, 2014 (New Orleans, LA)</b>	
Attendees	4
Written Comments	1
<b>December 15, 2014 (New York, NY)</b>	
Attendees	4
Written Comments	0
<b>Email</b>	41
<b>U.S. Postal Service Mail</b>	7
<b>Total Attendees</b>	19
<b>Total Comments</b>	49

## *Summary of Comments*

The public and local agencies raised several concerns during the scoping comment period. FirstNet reviewed the comments received and grouped them by resource area or PEIS topic. Table 2 summarizes the general concerns raised during scoping.

**Table 2. Summary of Comments Received during Scoping**

Issues/Concerns
• Agencies to provide FirstNet with State-specific environmental compliance information and points of contact
• Agencies to provide FirstNet with contacts within their local organizations and trade organizations
• Concern that placement of towers would impact historic/recreational/ecological study use of a specific area (i.e., new tower in Tucson, AZ at/on Tumamoc Hill or in/near the historic district)

Table 3 provides a summary of the comments received from federal agencies, state agencies, and local government organizations; comments are paraphrased and condensed from the actual comments. The environmental analysis included in the PEIS will rely on the full text of the comments as submitted. Copies of the comments received are included in **Appendix E**.

**Appendix F** provides FirstNet responses to the comments received.

**Table 3. Summary of Comments Received from Federal, State, and Local Government**

Agency / Interest Group	Comment Summary
<b>Federal Government</b>	
U.S. Environmental Protection Agency, Region 9 (Ann McPherson)	<ul style="list-style-type: none"> <li>Notification of areas of particular concern, including impacts to water, air, biological resources, invasive species, and habitat protection.</li> <li>Included information regarding suggested content for particular topics and resource areas.</li> </ul>
<b>State Government</b>	
Virginia Department of Environmental Quality (Ellie Irons)	<ul style="list-style-type: none"> <li>Request for Federal Consistency Determination under the Coastal Zone Management Act</li> </ul>
Virginia Department of Environmental Quality (Mark Alling)	<ul style="list-style-type: none"> <li>Water: ensure that construction best management practices will be used to avoid erosion and sedimentation; provide point of contact for wetland permits and for construction and stormwater permits</li> <li>Waste: ensure that hazardous and solid waste be disposed of according to VA regulations; provide point of contact for hazardous and solid waste concerns</li> </ul>
<b>Local Government Organizations</b>	
Orleans Parish Communications District (Catherine Cargo)	<ul style="list-style-type: none"> <li>Provide outreach to Neighborhood Empowerment Network Association (NENA), Association of Public-Safety Communications Officials (APCO), and their local chapters</li> </ul>
Pima County, Arizona, District 5 Supervisor (Richard Elias)	<ul style="list-style-type: none"> <li>Concern that FirstNet activities may affect cultural resources in Tucson, AZ (i.e., Tumamoc Hill)</li> </ul>

## **Appendix A: Notice of Intent**

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# Notices

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

## DEPARTMENT OF COMMERCE

### Census Bureau

#### Proposed Information Collection; Comment Request; Survey of Housing Starts, Sales, and Completions

**AGENCY:** U.S. Census Bureau, Commerce.

**ACTION:** Notice.

**SUMMARY:** The Department of Commerce, as part of its continuing effort to reduce paperwork and respondent burden, invites the general public and other Federal agencies to take this opportunity to comment on proposed and/or continuing information collections, as required by the Paperwork Reduction Act of 1995.

**DATES:** To ensure consideration, written comments must be submitted on or before January 12, 2015.

**ADDRESSES:** Direct all written comments to Jennifer Jessup, Departmental Paperwork Clearance Officer, Department of Commerce, Room 6616, 14th and Constitution Avenue NW., Washington, DC 20230 (or via the Internet at [jjessup@doc.gov](mailto:jjessup@doc.gov)).

**FOR FURTHER INFORMATION CONTACT:** Requests for additional information or copies of the information collection instrument(s) and instructions should be directed to Erica Filipek, U.S. Census Bureau, MCD, CENHQ Room 7K057, 4600 Silver Hill Road, Washington, DC 20233, telephone (301) 763-5161 (or via the Internet at [Erica.Mary.Filipek@census.gov](mailto:Erica.Mary.Filipek@census.gov)).

#### SUPPLEMENTARY INFORMATION:

##### I. Abstract

The U.S. Census Bureau plans to request a three-year extension of the current Office of Management and Budget (OMB) clearance of the Survey of Housing Starts, Sales and Completions, also known as the Survey of Construction (SOC). The SOC collects

monthly data on new residential construction from a sample of owners or builders. The Census Bureau uses the Computer-Assisted Personal Interviewing (CAPI) electronic questionnaires SOC-QI/SF.1 and SOC-QI/MF.1 to collect data on start and completion dates of construction, physical characteristics of the structure (floor area, number of bathrooms, type of heating system, etc.), and if applicable, date of sale, sales price, and type of financing. The SOC provides widely used measures of construction activity, including the economic indicators Housing Starts and Housing Completions, which are from the New Residential Construction series, and New Residential Sales.

We sample about 1,700 new buildings each month (20,400 per year). We inquire about the progress of each building multiple times until it is completed (and a sales contract is signed, if it is a single-family house that is built for sale). For single-family buildings, we conduct an average of 8.17 interviews and for multifamily buildings, we conduct an average of 7.0 interviews. The total number of interviews conducted each year for single-family buildings is about 107,844 and for multifamily buildings is about 50,400. Each interview takes 5 minutes on average. Therefore, the total annual burden is 13,187 hours.

##### II. Method of Collection

The Census Bureau uses its field representatives to collect the data. The field representatives conduct interviews to obtain data.

##### III. Data

*OMB Control Number:* 0607-0110.  
*Form Number(s):* SOC-QI/SF.1 and SOC-QI/MF.1.

*Type of Review:* Regular submission.  
*Affected Public:* Individuals or households, business, or other for-profit institutions.

*Estimated Number of Respondents:* 20,400.

*Estimated Time per Response:* 5 minutes.

*Estimated Total Annual Burden Hours:* 13,187.

*Estimated Total Annual Cost to Public:* The estimated cost to the respondent is \$404,841 based on an average hourly pay for the respondent of \$30.70. This estimate was taken from the Department of Labor, Bureau of

## Federal Register

Vol. 79, No. 218

Wednesday, November 12, 2014

Labor Statistics, Occupational Employment Statistics Survey for 2013.  
*Respondent's Obligation:* Voluntary.  
*Legal Authority:* Title 13 U.S.C. 182.

### IV. Request for Comments

Comments are invited on: (a) Whether the proposed collection of information is necessary for the proper performance of the functions of the agency, including whether the information shall have practical utility; (b) the accuracy of the agency's estimate of the burden (including hours and cost) of the proposed collection of information; (c) ways to enhance the quality, utility, and clarity of the information to be collected; and (d) ways to minimize the burden of the collection of information on respondents, including through the use of automated collection techniques or other forms of information technology.

Comments submitted in response to this notice will be summarized and/or included in the request for OMB approval of this information collection; they also will become a matter of public record.

Dated: November 6, 2014.

**Glenna Mickelson,**  
*Management Analyst, Office of the Chief Information Officer.*

[FR Doc. 2014-26734 Filed 11-10-14; 8:45 am]

BILLING CODE 3510-07-P

## DEPARTMENT OF COMMERCE

### National Telecommunications and Information Administration

#### First Responder Network Authority

[Docket Number: 141104926-4926-01]

RIN 0660-XC014

#### Notice of Intent To Prepare Programmatic Environmental Impact Statements and Conduct Scoping for the Nationwide Public Safety Broadband Network

**AGENCY:** First Responder Network Authority, National Telecommunications and Information Administration, U.S. Department of Commerce.

**ACTION:** Notice of Intent.

**SUMMARY:** The First Responder Network Authority ("FirstNet") announces its intent to prepare five regional

Programmatic Environmental Impact Statements (“PEISs”) and conduct public scoping meetings to evaluate the potential environmental impacts of the proposed nationwide public safety broadband network. The specific locations, dates, and times for the scoping meetings will be announced on the FirstNet Web site, no later than one week prior to each meeting.

**DATES:** The scoping period for this notice will begin on the date of publication of this notice and will end December 29, 2014. Comments to this notice must be submitted on or before December 29, 2014.

**ADDRESSES:** The public is invited to submit written comments to this Notice. Written comments may be submitted electronically via email to [PEIScomments@firstnet.gov](mailto:PEIScomments@firstnet.gov) or by mail (to the address listed in **FOR FURTHER INFORMATION CONTACT**). Comments received will be made a part of the public record and may be posted to FirstNet’s Web site ([www.firstnet.gov](http://www.firstnet.gov)) without change. Comments should be machine readable and should not be copy-protected. All personally identifiable information (e.g., name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business

information or otherwise sensitive or protected information.

**FOR FURTHER INFORMATION CONTACT:** Amanda Pereira, NEPA Coordinator, First Responder Network Authority, National Telecommunications and Information Administration, U.S. Department of Commerce, 12201 Sunrise Valley Drive, M/S 243, Reston, VA 20192.

**SUPPLEMENTARY INFORMATION:** The Middle Class Tax Relief and Job Creation Act of 2012 (Pub. L. 112–96, Title VI, 126 Stat. 256 (codified at 47 U.S.C. 1401 *et seq.*)) (the “Act”) created and authorized FirstNet to take all actions necessary to ensure the building, deployment, and operation of an interoperable, nationwide public safety broadband network (“NPSBN”) based on a single, national network architecture. The Act meets a long-standing and critical national infrastructure need, to create a single, nationwide network that will, for the first time, allow police officers, fire fighters, emergency medical service professionals, and other public safety entities to effectively communicate with each other across agencies and jurisdictions.

The National Environmental Policy Act of 1969 (42 U.S.C. 4321–4347) (“NEPA”) requires federal agencies to

undertake an assessment of environmental effects of their proposed actions prior to making a final decision and implementing the action. NEPA requirements apply to any federal project, decision, or action that may have a significant impact on the quality of the human environment. NEPA also establishes the Council on Environmental Quality (“CEQ”), which issued regulations implementing the procedural provisions of NEPA (see 40 CFR parts 1500–1508). Among other considerations, CEQ regulations at 40 CFR 1508.28 recommend the use of *tiering* from a “broader environmental impact statement (such as a national program or policy statements) with subsequent narrower statements or environmental analysis (such as regional or basin wide statements or ultimately site-specific statements) incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared.”

Due to the geographic scope of FirstNet (all 50 states, the District of Columbia, and five territories) and the diversity of ecosystems potentially traversed by the project, FirstNet has elected to prepare five regional PEISs. The five PEISs will be divided as follows:

East	Central	West	South	Non-contiguous
Delaware	Colorado	Arizona	Alabama	Alaska
District of Columbia	Illinois	California	Arkansas	American Samoa
Connecticut	Indiana	Idaho	Florida	CNMI
Maine	Iowa	Nevada	Georgia	Guam
Maryland	Kansas	Oregon	Kentucky	Hawaii
Massachusetts	Michigan	Washington	Louisiana	Puerto Rico
New Hampshire	Minnesota		Mississippi	U.S. Virgin Islands
New Jersey	Missouri		New Mexico	
New York	Montana		North Carolina	
Pennsylvania	Nebraska		Oklahoma	
Rhode Island	North Dakota		South Carolina	
Vermont	Ohio		Tennessee	
Virginia	South Dakota		Texas	
West Virginia	Utah			
	Wisconsin			
	Wyoming			

Once a PEIS is completed and a Record of Decision (ROD) is signed, the proposed FirstNet projects can begin to submit the site-specific environmental documentation to determine if the proposed project has been adequately evaluated in the PEIS or warrants a Categorical Exclusion, an Environmental Assessment, or an Environmental Impact Statement.

Dated: November 6, 2014.

**Genevieve Walker,**

*Director of Environmental Compliance, First Responder Network Authority.*

[FR Doc. 2014-26772 Filed 11-10-14; 8:45 am]

**BILLING CODE 3510-TL-P**

## DEPARTMENT OF COMMERCE

### National Telecommunications and Information Administration

#### First Responder Network Authority

#### Special Meeting of the First Responder Network Authority Board Finance Committee

**AGENCY:** First Responder Network Authority, National Telecommunications and Information

## **Appendix B: Newspaper Notice**

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## Made of mushrooms and wasp spit, the drone goes green

Students' plan could solve the mess made by crashing robots

BY RACHEL FELTMAN

A group of college students has created an environmentally friendly drone — think veggie leather.

Led by one of NASA's synthetic biology experts, the students made an unmanned aerial vehicle almost entirely out of biodegradable materials. After a crash, these little fliers would basically disappear.

Drones can be a great help in dealing with environmental issues, flying into protected wooded areas to count the surviving population of an endangered animal or other types of coral reefs to monitor their condition.

"But sometimes they can turn into litter: If a drone goes down in a protected area, it might not be possible for anyone to retrieve the hunk of metal and plastic."

"I have colleagues who do remote sensing for environmental assessments and were in a UAV box for a couple months in an area you really wouldn't want to lose one in," said Lynn Rothschild, of NASA's Ames Research Center.

Rothschild serves as an advisor for a team competing in the International Genetically Engineered Machines competition, and the issue of downed-drone litter seemed like a good one for her group to tackle.

"Normally I just give them free reign, but then there are 15 very bright students who all want to do 15 or 30 different things," she said. "I just said, 'I need an overall project. But they really just ran with it from there.'

One of her students found a company called Ecovative Design that was growing the team's dream material: Blocks of fungal foam.

Mushrooms are made up of a

structure called mycelium. It looks like a fuzzy mat of a wider web when it's spread out, but it can grow to fit the confines it's placed in, eventually forming a tough chunk of foamy material. By putting mycelium into a mold filled with a tasty growing medium — like dead leaves or straw — you can create a custom-shaped mushroom block. Once dried, it's a custom-shaped mushroom drone frame. A blast of heat kills the mycelium to stop its growth.

You end up with this great moldable block," he never fungal bites," Rothschild said.

To make the frame more durable, the students created a bioplastic to coat it.

You can make a kind of veggie leather using bacteria that create cellulose — the tough stuff that creates cell walls in plants. The researchers grew a cotton sheet and harvested, then wrapped around the mycelium frame. When it dries, it's tough

and hard, and the team's bioblocking didn't stop there. They also harnessed the power of the insect world to keep their drone from dissolving in midair. The drone is covered in proteins cloned from common wasp saliva, which the insects use to waterproof their nests.

Now, that's as far as the drone's biodegradability goes: It still uses a traditional rotor, battery and controls. But other

researchers around the world are working on ways to make biodegradable versions of these components, Rothschild said. And her team is investigating the use of biological sensors, which would allow them to replace some of the sensors on the drone with bacteria.

"Eventually, I'd say that most, if not all, of the drone could be made from biological materials," she said.

More at washingtonpost.com/blogs/speaking-of-science

### Islamic State kills tribesmen in Iraq

REUTERS

RAGHDAH — Islamic State militants have killed at least 25 members of a Sunni Muslim tribe in a village on the eastern edge of the provincial capital Ramadi, local officials said Saturday, in apparent revenge for the tribe's opposition to the radical Islamists.

The said the bodies of the men from the Albu Fahid tribe were discovered by the Iraqi army when it launched a counteroffensive against the Islamic State forces near the capital of Anbar province.

Last month, Islamic State fighters killed 10 members of the Albu Nimir tribe in Anbar in an attempt to break local resistance to their advances in the Sunni Muslim province they have largely controlled for nearly a year.

Islamic State, which has seized control of large parts of Syria and Iraq, continues to gain territory in Anbar despite three months of U.S.-led airstrikes.

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You're invited to attend a public scoping meeting to start the environmental review of the First Responder Network Authority (FirstNet) Nationwide Public Safety Broadband Network (NPSBN).

November 29, 2014 from 4-8 PM  
Department of Commerce lobby  
1401 Constitution Ave NW  
Washington, DC 20230

Drop by and during meeting hour, get information and give input on the scope of this programmed environmental study.

Comments accepted via mail to:

Mr. Michael J. Leppla, NEPA Coordinator, FirstNet  
12201 Sunrise Valley Drive,  
M/S 2425, Reston, VA 20192, or via  
e-mail: PEPALeppla@firstnet.gov

through close of business  
December 29, 2014.

For more information,  
please visit [www.firstnet.gov](http://www.firstnet.gov).

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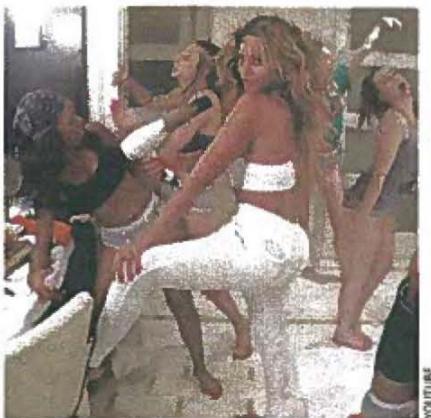
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Something to be it that excuses it of the way by e did it because -rather than first ers the idea that hority figures."

**PIN.COM** is incredulous ate quarterback Jameis O-17 win over Boston ter, Winston physically Seminoles could run a ring the Eagles' defense ejected from the game, could have been.

**"The video is a low-budget, no frills look at the super-silly side of the hottest woman in entertainment."**

**NEHA PRAKASH AT MASHABLE.COM** analyzes the music video dropped late Friday by Beyonce. For "7/11," a surprise single from the singer's four-disc Platinum Edition Box Set, due out today, the DIY-esque video features Beyonce twerking, doing the Harlem Shake and wearing a "kale" sweatshirt.

**"That was one of the most disrespectful headlines I have ever read."**

**COMMENTER DERRICFROMDC AT TMZ.COM** is outraged by celebrity news website TMZ's headline announcing the death of former D.C. Mayor Marion Barry. When TMZ posted the article Sunday morning, headlined "CRACK MAYOR DEAD AT 78," it prompted outrage on social media. A petition asking TMZ to apologize for and remove the distasteful headline garnered more than 10,000 signatures by Sunday evening.

**"Can I just say how much I love that every single comment here is pointing out the superiority of the single blade razor?"**

**COMMENTER NATHAN LOFTIES AT FACEBOOK.COM** finds the main takeaway of a photo posted last week by Gillette to its Facebook page. In honor of its 110th anniversary, the men's razor maker posted an image of its 1904 patent alongside the 2014 swiveled version. Instead of commanding its innovation and how far the technology has come, most users spoke of their disappointment in the product's evolution.

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**Interested in the Nationwide Public Safety Broadband Network?**

You're invited to attend a public scoping meeting to start the environmental review of the First Responder Network Authority (FirstNet) Nationwide Public Safety Broadband Network (NPSBN).

November 25, 2014 from 4-8 PM  
Department of Commerce lobby  
1401 Constitution Ave NW  
Washington, DC 20230

Drop by any time during meeting hours to get information and give input on the scope of this programmatic environmental study. Comments accepted via mail to Ms. Amanda Pereira, NEPA Coordinator, FirstNet, 12201 Sunrise Valley Drive, MS 243, Reston, VA 20192, or via e-mail to PEIScomments@firstnet.gov through close of business December 29, 2014.

For more information please visit [www.firstnet.gov](http://www.firstnet.gov).

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## AFFIDAVIT OF PUBLICATION

### IN THE MATTER OF

Interested in the Nationwide Public Safety Broadband Network?

}

STATE OF HAWAII

}  
} SS.

City and County of Honolulu }  
}

Doc. Date: DEC - 1 2014 # Pages: 1

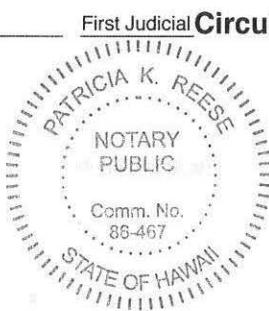
Notary Name: Patricia K. Reese

First Judicial Circuit

Doc. Description: Affidavit of  
Publication

Notary Signature 

Date DEC - 1 2014



Lisa Kaukani being duly sworn, deposes and says that she is a clerk, duly authorized to execute this affidavit of Oahu Publications, Inc. publisher of The Honolulu Star-Advertiser and MidWeek, that said newspapers are newspapers of general circulation in the State of Hawaii, and that the attached notice is true notice as was published in the aforementioned newspapers as follows:

Honolulu Star-Advertiser 1 times on:

11/30/2014

Midweek Wed. 0 times on:

       times on:

And that affiant is not a party to or in any way interested in the above entitled matter.

Lisa Kaukani

Subscribed to and sworn before me this 1<sup>st</sup> day

of December A.D. 2014

Patricia K. Reese, Notary Public of the First Judicial Circuit, State of Hawaii

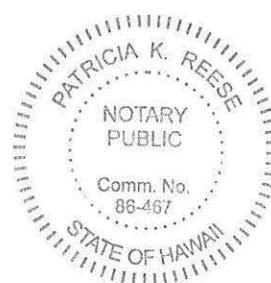
My commission expires: Oct 07, 2018

Interested in the Nationwide Public Safety Broadband Network?

You're invited to attend a public scoping meeting to start the environmental review of the First Responder Network Authority (FirstNet) Nationwide Public Safety Broadband Network (NPSBN).

December 2, 2014 from 4-8 PM  
Neal Blaisdell Center  
Hawaii Suites 7 and 8 (located behind the box office)  
777 Ward Avenue  
Honolulu, HI 96814

Drop by any time during meeting hours to get information and give input on the scope of this programmatic environmental study. Comments accepted via mail to Ms. Amanda Pereira, NEPA Coordinator, FirstNet, 12201 Sunrise Valley Drive, M/S 243, Reston, VA 20192, or via e-mail to PEISComments@firstnet.gov through close of business December 29, 2014. For more information, please visit www.firstnet.gov.  
(SA692549 11/30/14)



Ad # 0000692549

SP.NO.: \_\_\_\_\_ L.N. \_\_\_\_\_

# DECLARATION OF PUBLICATION OF SAN FRANCISCO CHRONICLE

Lori Gomez

Declares that:

The annexed advertisement has been regularly published  
In the

SAN FRANCISCO CHRONICLE

Which is an was at all times herein mentioned  
established as newspaper of general circulation in the  
City and County of San Francisco, State of California, as  
the term is defined by Section 6000 of the Government  
Code

SAN FRANCISCO CHRONICLE

(Name of Newspaper)

901 Mission Street

San Francisco, CA 94103

From 11/30/14

To 11/30/14

Namely on 11/30/14

(Dates of Publication)

I declare under penalty of perjury that the foregoing is  
true and correct.

Executed on 12/4/14

At San Francisco, California

ARIZONA DAILY STAR

Tucson, Arizona

STATE OF ARIZONA)  
COUNTY OF PIMA)

Debbie Capanear, being first duly sworn deposes and says: that she is the Advertising Representative of TNI PARTNERS, a General Partnership organized and existing under the laws of the State of Arizona, and that it prints and publishes the Arizona Daily Star, a daily newspaper printed and published in the City of Tucson Pima County, State of Arizona, and having a general circulation in said City, County, State and elsewhere and that the attached ad was printed and

Legal Notice

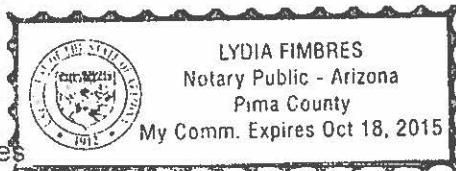
published correctly in the entire issue of the said Arizona Daily Star on each of the following dates, to-wit:

NOVEMBER 30, 2014

Debbie Capanear

Subscribed and sworn to before me this 3 day of  
December, 2014

Lydia Fimbres  
Notary Public



My commission expires

AD NO. 8316430

Interested in the Nationwide Public Safety Broadband Network?

You're invited to attend a public scoping meeting to start the environmental review of the First Responder Network Authority (FirstNet) Nationwide Public Safety Broadband Network (NPSBN).

December 4, 2014 from 4-8 PM  
Embassy Suites - Williams Center  
5335 E. Broadway Blvd  
Tucson, AZ 85711

Drop by any time during meeting hours to get information and give input on the scope of this programmatic environmental study. Comments accepted via mail to Ms. Amanda Pereira, NEPA Coordinator, FirstNet, 12201 Sunrise Valley Drive, M/S 243, Reston, VA 20192, or via e-mail to [PEIScomments@firstnet.gov](mailto:PEIScomments@firstnet.gov) through close of business December 29, 2014. For more information, please visit [www.firstnet.gov](http://www.firstnet.gov).

Publish November 30, 2014 • Arizona Daily Star

## **Interested in the Nationwide Public Safety Broadband Network?**

You're invited to attend a public scoping meeting to start the environmental review of the First Responder Network Authority (FirstNet) Nationwide Public Safety Broadband Network (NPSBN).

**Kansas City University  
of Medicine and Biosciences  
Classroom Annex Building, Classroom A  
1750 East Independence Avenue  
Kansas City, MO 64106**

Drop by any time during meeting hours to get information and give input on the scope of this programmatic environmental study. Comments accepted via mail to Ms. Amanda Pereira, NEPA Coordinator, FirstNet, 12201 Sunrise Valley Drive, M/S 243, Reston, VA 20192, or via e-mail to PEISComments@firstnet.gov through close of business December 29, 2014.

For more information please visit [www.firstnet.gov](http://www.firstnet.gov).





620 8TH AVENUE • NEW YORK, NY 10018

### CERTIFICATION OF PUBLICATION

#### Interested in the Nationwide Public Safety Broadband Network?

You're invited to attend a public scoping meeting to start the environmental review of the First Responder Network Authority (FirstNet) Nationwide Public Safety Broadband Network (NPSBN).

December 15, 2014 from 4-8 PM  
New York University  
Kimmel Center, Grand Hall  
60 Washington Square South  
New York, NY 10012

Drop by any time during meeting hours to get information and give input on the scope of this programmatic environmental study. Comments accepted via mail to Ms. Amanda Parikh, NEPA Coordinator, FirstNet, 12201 Sunrise Valley Drive, M/S 243, Reston, VA 20192; or via e-mail to [PEComments@firstnet.gov](mailto:PEComments@firstnet.gov); through close of business December 29, 2014. For more information, please visit [www.firstnet.gov](http://www.firstnet.gov).

DEC 16 2014

20 \_\_\_\_\_

I, Alice Wehrman, in my capacity as a Principal Clerk of the Publisher of **The New York Times** a daily newspaper of general circulation printed and published in the City, County and State of New York, hereby certify that the advertisement annexed hereto was published in the editions of **The New York Times** on the following date or dates, to wit on

DEC 14 2014

20 \_\_\_\_\_

Alice Wehrman

Approved:

Maria Fannullo

THIS CERTIFICATION  
NOT VALID  
WITHOUT NYT RAISED SEAL

## **Appendix C: Scoping Meeting Posters and Handouts**

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# Programmatic Environmental Impact Statement

## What are the Project Alternatives?

### Mixed Technologies Alternative:

FirstNet intends to construct a long-term evolution (LTE) nationwide public safety broadband network (NPSBN) using a combination of the following methods:

- Collocation of the network equipment on existing towers, poles and structures, some of which would require structural hardening or reinforcement to improve disaster resistance and resiliency;
- Construction of new communication towers, poles and associated structures to include generators, equipment sheds, fencing, and concrete pads;
- Collocation on existing fiber facilities, including lighting dark fiber and installation of new fiber on existing poles and in existing conduit;
- Installation of new conduit and fiber using trenching (including vibratory plowing) or directional boring (including horizontal directional drilling);
- Deployment of satellite phones and other portable satellite technology;
- Installation of microwave facilities for cell-site backhaul communication; and
- Utilization of deployable technologies to reach rural and remote areas. Deployable technologies encompass a range of items, generally characterized as the following:
  - Cell on Wheels (COW): a cellular base station on a trailer with an expandable antenna mast and usually a microwave or satellite link back to the main controller;
  - Cell on Light Truck (COLT): a cellular base station on a light truck platform with an expandable antenna mast and usually a microwave or satellite link back to the main controller;
  - System on Wheels (SOW): a full base station and controller on a trailer/truck/big rig/etc. A SOW is a fully self-contained cellular system that can provide an island system with no need for satellite/microwave link back; applicability of this type of deployable technology may be limited if there is no internet connectivity; and,
  - Deployable Aerial Communications Architecture: Aerial vehicles, including, but not limited to, drones, weather balloons, and blimps, which would be deployed at high altitudes and are capable of providing wide-area coverage, although with relatively low capacity/throughput.

### Deployable Technologies Only Alternative:

Procure, deploy, and maintain a nationwide fleet of mobile communications systems to provide temporary coverage in areas not covered by existing, usable infrastructure, as there would be no collocation of equipment or new construction. Generally, these units would be deployed at times of an incident to the affected area. These mobile communication units would be temporarily installed and may use existing satellite, microwave, or radio systems for backhaul.

### No Action Alternative:

Under the No Action Alternative, the Nationwide Public Safety Broadband Network (NPSBN) would not be constructed; there would be no nationwide, coordinated system dedicated to public safety interoperable communications. The existing multiplicity of communications networks would remain in place, as would the current, known limitations and problems of existing communication networks during times of emergency or disaster. This alternative would require an act of Congress to revise the Act, which currently requires the NPSBN.





# Programmatic Environmental Impact Statement

## Description of the Project Area

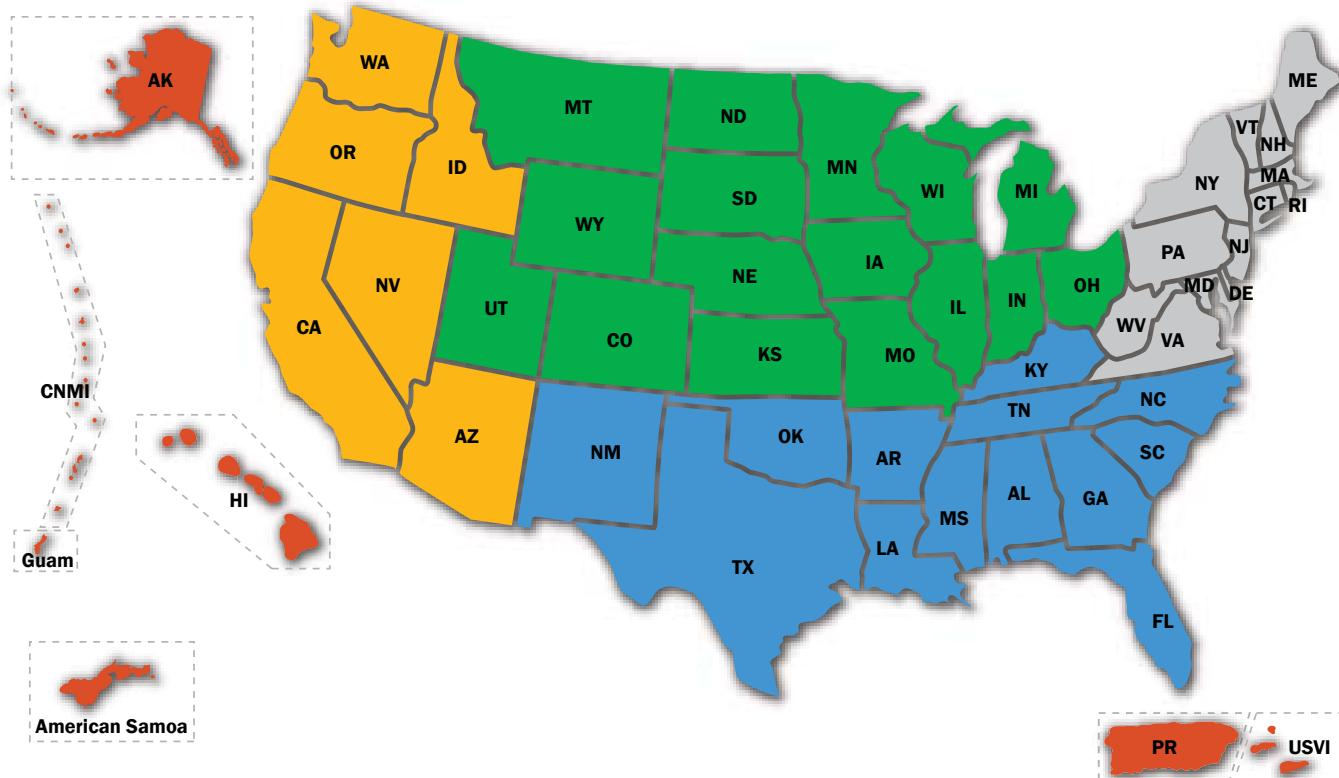
The FirstNet Programmatic Environmental Impact Statement project area would cover the geography of 50 states, 5 territories, the District of Columbia, and 566 tribal nations. Over the past 30 years, wireless operators have invested tens of billions of dollars in terrestrial networks covering over 60% of the U.S. land mass. The Nationwide Public Safety Broadband Network (NPSBN) is intended to provide nationwide service, including substantial rural milestones as part of each phase of the construction and deployment of the network.

FirstNet has determined that the design, construction, and operation of the NPSBN is a broad action with nationwide implications. This approach provides for the broadest and most extensive analysis in order to support the balancing of different considerations, including social, economic, and environmental issues. The programmatic approach creates a comprehensive analytical framework that assesses impacts expected from the NPSBN as a whole. It also supports any subsequent site-specific environmental analyses that may be required for individual actions at specific locations, once they are identified.

The programmatic approach allows FirstNet to identify and define three categories of actions: those types of actions that would not have a significant impact on the environment; those actions that would not have a significant impact if certain mitigation measures or best management practices are implemented; and those actions that will require site-specific analysis to determine the nature and extent of impacts.

The project area is divided into five regions:

- East** – comprised of FEMA regions 1, 2, and 3 (with the exception of PR and USVI)
- Central** – comprised of FEMA regions 5, 7, and 8
- South** – comprised of FEMA regions 4 and 6
- West** – comprised of FEMA regions 9 and 10 (except for AK and the Pacific Islands)
- Non-Contiguous** – comprised of AK, HI, PR, USVI, CNMI, AS, and Guam



# Programmatic Environmental Impact Statement

## NEPA Process

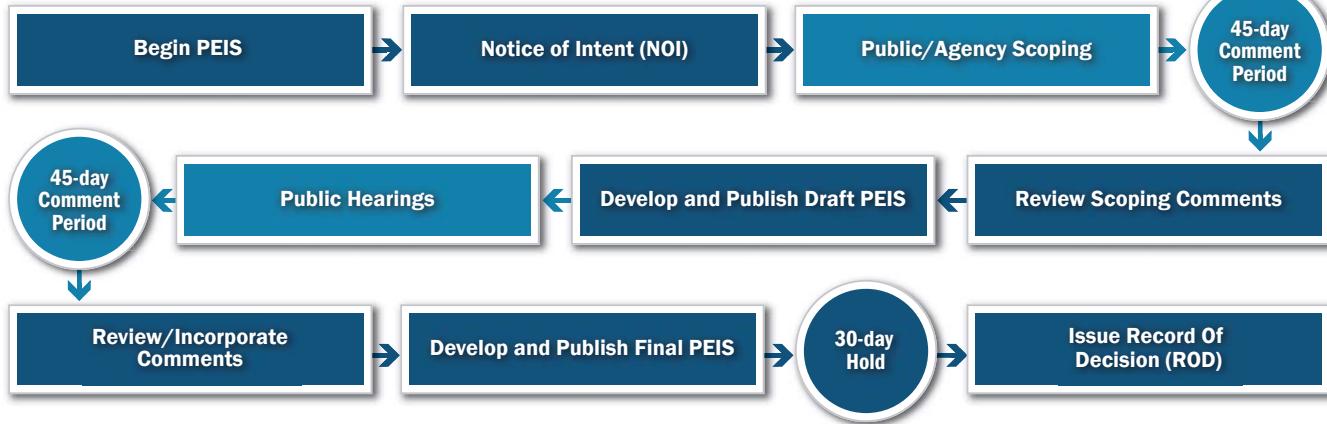
The National Environmental Policy Act of 1969 (NEPA) (42 U.S.C. 4321 et seq.) provides a framework to evaluate the impact of major federal actions on the environment and allows the public the opportunity to provide input on implementation alternatives. NEPA requires federal agencies to integrate environmental values into their decision-making processes by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions. NEPA also established the Council on Environmental Quality (CEQ). As part of the Executive Office of the President, CEQ coordinates federal environmental efforts and is responsible for advising the President on environmental policy matters. CEQ has also promulgated regulations implementing NEPA which are binding for all federal agencies. These regulations address the procedural provisions of NEPA and the administration of the NEPA process, including preparation of Environmental Impact Statements (EIS).

NEPA is applicable to all "major" federal actions affecting the quality of the human environment. A major federal action is an action with effects that may be major and which are potentially subject to federal control and responsibility. These actions may include new and continuing activities, including projects and programs entirely or partly financed, assisted, conducted, regulated,

or approved by federal agencies; new or revised agency rules, regulations, plans, policies, or procedures; and legislative proposals. FirstNet has determined the construction, operation, and maintenance of the Nationwide Public Safety Broadband Network (NPSBN) qualifies as a major federal activity under these criteria and triggers a NEPA review.

Because of this, FirstNet is required to comply with NEPA, which requires that the government examine the environmental, social, historic, and cultural impacts of its proposed actions before it irretrievably commits resources to undertake them. Furthermore, FirstNet must comply with its own NEPA implementing procedures, which were finalized and published in the Federal Register on April 29, 2014. On November 12, 2014, FirstNet published a Notice of Intent (NOI) to prepare five coordinated Programmatic Environmental Impact Statements (PEIS) in the Federal Register. The PEISs will analyze the direct, indirect, and cumulative impacts of the alternative approaches to the construction, operation, and maintenance of the NPSBN on natural, cultural, and social resources.

The NEPA process is depicted in the diagram below. The light blue coloring indicates those opportunities for the public to comment on the project.



The PEIS process started with publication of the Notice of Intent in the Federal Register on November 12, 2014. The scoping/public comment period for this PEIS will end on December 29, 2014.

Currently, the PEIS is at the scoping phase. During the scoping phase, a wide range of partners including the public, interest groups, and agencies at all levels of government are encouraged to provide input about the project. The PEIS will incorporate and build upon the prior planning efforts, environmental studies, and public input.

All of the collected information will form the basis for a range of alternatives to implement the project and eventually the selection of a preferred alternative.

The preferred alternative will be identified in the Draft PEIS when it is made available to the public for review and comment. A 45-day public comment period with public hearings similar to the scoping meetings will be held. The Final PEIS will incorporate comments received on the Draft PEIS. After publication of the Final PEIS, FirstNet will make the decision regarding the selection of an alternative within a Record of Decision.



# Programmatic Environmental Impact Statement

## Public Involvement

The National Environmental Policy Act (NEPA) regulations require that a lead agency preparing an Environmental Impact Statement (EIS) is to involve the public, along with government agencies, American Indian tribes, private-sector organizations, and other interested parties in scoping (40 CFR 1501.7).

The public scoping process for the FirstNet Programmatic EIS (PEIS) began with publication of the Notice of Intent in the Federal Register on November 12, 2014. Scoping is the first phase of the NEPA analysis process and gives interested parties the chance to comment on the proposed action and to offer suggestions about the issues to be considered in the EIS analyses. Interested government agencies, American Indian tribes, private-sector organizations, and the general public are encouraged to participate in this scoping process. The scoping period will last for 45 days, ending on December 29, 2014. Written comments can be submitted either electronically or by paper copy. Information and public comments received during the Scoping Period will be reviewed for consideration in the development of each regional Draft PEIS.

To receive updates and announcements regarding the project and public involvement opportunities on this project, email [PEIScomments@firstnet.gov](mailto:PEIScomments@firstnet.gov).

## Public Scoping Comment Period: November 12 to December 29, 2014

## Scoping Meetings

FirstNet is holding scoping meetings in the following locations to obtain comments from the public:

- Tuesday, November 25: Washington DC, 4 – 8 p.m., EST
- Tuesday, December 2: Honolulu, HI, 4 – 8 p.m., HST
- Thursday, December 4: San Francisco, CA, 4 – 8 p.m., PST
- Thursday, December 4: Tucson, AZ, 4 – 8 p.m., MST
- Tuesday, December 9: Kansas City, MO, 4 – 8 p.m., CST
- Thursday, December 11: New Orleans, LA, 5 – 9 p.m., CST
- Monday, December 15: New York, NY, 4 – 8 p.m., EST

Each scoping meeting will provide an opportunity for the public to speak with subject matter experts and FirstNet staff. The scoping meetings are an open format, allowing the public to drop in at their convenience throughout the evening. Comments can be provided to FirstNet staff with a note taker present to transcribe their comments. In addition, attendees can provide their comments in writing at the meeting.

## Submitting Comments

The public is invited to submit written comments for consideration during scoping. Written comments may be submitted electronically via email to [PEIScomments@firstnet.gov](mailto:PEIScomments@firstnet.gov), in person using the comment forms provided at this scoping meeting, or by mail to:

Amanda Pereira, NEPA Coordinator  
FirstNet  
12201 Sunrise Valley Drive, M/S 243  
Reston, VA 20192

Comments received will be made a part of the public record and may be posted to the FirstNet website without change. Comments should be machine readable and should not be copy-protected. All personally identifiable information (e.g., name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.

## How Are Scoping Comments Used?

Scoping for the Draft PEIS will provide several key elements to assist in the preparation of the document:

1. Gathering information and ideas from the public and key stakeholder groups, such as the public safety community, about the analytical issues related to the Nationwide Public Safety Broadband Network;
2. Making determinations about which issues should be analyzed; and
3. Identifying alternatives to the proposed action that should be considered for analysis.

The scoping process is ongoing and critical to informing federal agency actions, in that it begins before the PEIS analyses are initiated and continues throughout document development of the PEIS.



# Programmatic Environmental Impact Statement

## What is the Proposed Action?

The purpose of the proposed action is to develop a nationwide, interoperable, public safety broadband network (NPSBN). The goal of FirstNet is to provide dedicated services that are comparable to or better than those services public safety has access to today through commercial broadband wireless carriers. These applications and services are intended to enhance the ability of the public safety community to perform more reliably, effectively and safely. FirstNet's goal is that the NPSBN would also provide a backbone to allow for improved communications by carrying high-speed data, location information, images, and, eventually, streaming video. This capability is intended to increase situational awareness during an emergency and improve the ability of the public safety community to effectively engage in those critical activities.

## Description of the Proposed Action

The Proposed Action would encompass the design, construction, and operation of the NPSBN by FirstNet or a partner organization(s). By statute, the network must have several characteristics, including security, resiliency, backwards compatibility with existing commercial networks, integration with public safety access point (PSAPs) or their equivalents, substantial rural coverage, it must be built to open, non-proprietary, commercially available standards, and it must use existing infrastructure to the maximum extent economically desirable.

FirstNet intends to construct a core network, comprised of all standard Evolved Packet Core elements under the 3rd Generation Partnership Project (3GPP) standards (including the Serving and Packet Data Network Gateways, Mobility Management Entity, and the Policy and Charging Rules Function), device services, location services, billing functions, and all other network elements and functions other than the Radio Access Network (RAN). FirstNet expects to construct RAN networks that would consist of all cell site equipment, antennas, and backhaul equipment and services required to enable wireless communications with devices using the public safety broadband spectrum. In addition, FirstNet must continue to maintain and improve the NPSBN to account for new and evolving technologies.





# FirstNet™



## The Promise of FirstNet

### WHAT IS THE FIRST RESPONDER NETWORK AUTHORITY (FIRSTNET)?

FirstNet is an independent authority within the U.S. Department of Commerce's National Telecommunications and Information Administration. FirstNet is governed by a 15-member Board consisting of the Attorney General of the United States, the Secretary of Homeland Security, the Director of the Office of Management and Budget, and 12 members appointed by the Secretary of Commerce. The FirstNet Board is composed of representatives from public safety; local, state and federal government; and the wireless industry.

Signed into law on February 22, 2012, the [Middle Class Tax Relief and Job Creation Act](#) created FirstNet. The law gives FirstNet the duty to build, operate and maintain the first high-speed, nationwide wireless broadband network dedicated to public safety entities. FirstNet will provide a single interoperable platform for public safety communications.

### WHAT WILL BE POSSIBLE WITH THE FIRSTNET NETWORK?

The FirstNet network will improve citizen and responder safety and increase the efficiency and effectiveness of emergency response through cutting edge broadband communications. Imagine a day when a single communications network can be used to dispatch EMS personnel, a medical helicopter, police officers, and fire personnel from different jurisdictions all at the same time, utilizing voice, video, and data at broadband speeds.

Public safety personnel using the FirstNet network will be able to share applications, access databases, and provide better informed responses to incidents through integrated communications.

FirstNet's goal is to provide public safety-grade reliability and nationwide coverage so all public safety personnel can count on the network when they are on the job. FirstNet is also aiming to provide coverage solutions that let public safety "take the network along" to the destination in certain geographies. FirstNet will create a nationwide standard of service while affording localized customization and control.

When the FirstNet network launches, it will provide mission-critical, high-speed data services to supplement the voice capabilities of today's Land Mobile Radio (LMR) networks. Initially, the FirstNet network will be used for sending data, video, images and text. The FirstNet network will also carry location information and eventually support streaming video. FirstNet plans to offer cellular voice communications such as Voice over Long Term Evolution (VoLTE) or other alternatives.

## **WHY WAS FIRSTNET CREATED?**

The public safety community fought hard to fulfill the 9/11 Commission's last standing recommendation and lobbied Congress to pass legislation establishing a dedicated, reliable network for advanced data communications nationwide. During emergencies, public safety personnel need priority access and preemption, which are not available on commercial networks.

## **HOW WILL THE FIRSTNET NETWORK BENEFIT PUBLIC SAFETY?**

Using the FirstNet network will improve situational awareness, decision-making and responder and citizen health and safety. Just as smartphones have changed personal lives, FirstNet devices and applications will ultimately change the way public safety operates. FirstNet devices will work anywhere on the network and will save time when seconds matter. A market of millions of public safety users will bring savings opportunities to state and local budgets. FirstNet will bring the benefits of a single, nationwide, interoperable network that is built to open standards to public safety agencies across the country. With millions of users on a single network, FirstNet can take advantage of increased vendor competition and economies of scale to drive down the final cost to the public safety user.

## **WHAT WILL USERS PAY FOR FIRSTNET'S SERVICES?**

FirstNet intends to offer services at a compelling and competitive cost to attract millions of public safety users and make FirstNet self-sustaining. The use of FirstNet services and applications will be voluntary. The costs for FirstNet services and devices have not yet been set.

## **HOW WILL STATES AND AGENCIES PARTICIPATE IN THE BUILDOUT OF FIRSTNET?**

The law that established FirstNet requires it to consult with regional, state, tribal and local jurisdictions to ensure that the FirstNet network is designed to meet the needs of public safety across the country. State consultation will be a collaborative process, involving key stakeholders and leadership from each state and territory, and will be iterative to allow for enhancements and improvements from the state and territory. FirstNet will work through the designated single officer or governmental body during consultation to gather requirements from key stakeholders for developing its deployment plan. Additional information on state consultation is available at <http://firstnet.gov/consultation>.



# PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

## Public Involvement

The public scoping process began with publication of the Notice of Intent in the Federal Register on November 12, 2014. Scoping is the first phase of the NEPA analysis process and gives interested parties the chance to comment on the proposed action and to offer suggestions about the issues to be considered in the EIS analyses. Interested government agencies, American Indian tribes, private-sector organizations, and the general public are encouraged to participate in this scoping process.

The scoping period will last for 45 days, ending on December 29, 2014. Written comments can be submitted either electronically or by paper copy. Information and public comments received during the scoping period will be reviewed for consideration in the development of each regional Draft PEIS.

## Submitting Comments

The public is invited to submit written comments for consideration during scoping. Written comments may be submitted electronically via email to **PEIScomments@firstnet.gov** or by mail to:

Amanda Pereira, NEPA Coordinator  
FirstNet  
12201 Sunrise Valley Drive, M/S 243  
Reston, VA 20192

*Comments received will be made a part of the public record and may be posted to the FirstNet website without change. Comments should be machine readable and should not be copy-protected. All personally identifiable information (e.g., name, address) voluntarily submitted by the commenter may be publicly accessible. Do not submit confidential business information or otherwise sensitive or protected information.*



# PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

## What is NEPA?

The National Environmental Policy Act of 1969 (NEPA) provides a framework to evaluate the impact of major Federal actions on the environment and through the PEIS process, allows the public the opportunity to provide input on implementation alternatives.

The NEPA process is depicted in the diagram below. The light blue coloring indicates those opportunities for the public to comment on the project.



The PEIS process began with publication of the Notice of Intent in the Federal Register on November 12, 2014. The scoping/public comment period for this PEIS will end on December 29, 2014.

# PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

## Description of the Project Area

The FirstNet Programmatic Environmental Impact Statement project area would cover the geography of 50 states, 5 territories, the District of Columbia, and 566 Federally recognized tribes. Over the past 30 years, wireless operators have invested tens of billions of dollars in terrestrial networks covering over 60% of the U.S. land mass. The NPSBN is intended to provide nationwide service, and it is intended to include milestones that address wilderness and rural coverage gaps.

The project area is divided into five regions:

- **East** – comprised of FEMA regions 1, 2, and 3 (with the exception of PR and USVI)
- **Central** – comprised of FEMA regions 5, 7, and 8
- **South** – comprised of FEMA regions 4 and 6
- **West** – comprised of FEMA regions 9 and 10 (except for AK and the Pacific Islands)
- **Non-Contiguous** – comprised of AK, HI, PR, USVI, CNMI, AS, and Guam



# PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

## What are the Project Alternatives?

### Mixed Technologies Alternative:

Potential elements to be considered for the construction of a long-term evolution (LTE) nationwide public safety broadband network (NPSBN):

- Collocation of the network equipment on existing towers, poles and structures;
- Construction of new communication towers, poles and associated structures;
- Collocation on existing fiber facilities;
- Installation of new conduit and fiber using trenching or directional boring;
- Deployment of satellite phones and other portable satellite technology;
- Installation of microwave facilities for cell-site backhaul communication; and
- Utilization of deployable technologies to reach rural and remote areas, such as:
  - Cell on Wheels (COW)
  - Cell on Light Truck (COLT)
  - System on Wheels (SOW)
  - Deployable Aerial Communications Architecture: Aerial vehicles, including, but not limited to, drones, weather balloons, and blimps, which would be deployed at high altitudes and are capable of providing wide-area coverage, although with relatively low capacity/throughput.

### Deployable Technologies Alternative:

Procure, deploy, and maintain a nationwide fleet of mobile communications systems to provide temporary coverage in areas not covered by existing, usable infrastructure, for deployment at times of an incident to the affected area. These mobile communication units would be temporarily installed and may use existing satellite, microwave, or radio systems for backhaul.

### No Action Alternative:

Under the No Action, the NPSBN would not be constructed; there would be no nationwide, coordinated system dedicated to public safety interoperable communications. This alternative would require an act of Congress to revise the Act, which currently requires the NPSBN.

# PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT

## What is the Proposed Action?

The proposed action is to develop a nationwide, interoperable, public safety broadband network (NPSBN) with the goal of being comparable to or better than those services public safety has access to today through commercial broadband wireless carriers. These applications and services are intended to enhance the ability of the public safety community to perform more reliably, effectively and safely.

FirstNet's goal is that the NPSBN would also provide a backbone to allow for improved communications by carrying high-speed data, location information, images, and, eventually, streaming video. This capability is intended to increase situational awareness during an emergency and improve the ability of the public safety community to effectively engage in those critical activities.

## Description of the Proposed Action

The Proposed Action would encompass the design, construction, and operation of the nationwide NPSBN by FirstNet or a partner organization(s). By statute, the network must have several characteristics, including security, resiliency, backwards compatibility with existing commercial networks, integration with public safety answering points (PSAPs) or their equivalents, substantial rural coverage, it must be built to open, non-proprietary, commercially available standards, and it must use existing infrastructure to the maximum extent economically desirable.

FirstNet intends to construct a core network, comprised of all standard Evolved Packet Core elements under the 3rd Generation Partnership Project (3GPP) standards, device and location services, billing functions, and all other network elements other than the Radio Access Network (RAN). FirstNet expects to construct RAN networks that would consist of all cell site equipment, antennas, and backhaul equipment required to enable wireless communications with devices using the public safety broadband spectrum.

Finally, the Act states that FirstNet must continue to maintain and improve the NPSBN to account for new and evolving technologies.



**Appendix D: Attendance Lists  
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## **Appendix E: Comment Letters**

*Comment content included in Scoping Summary Report  
Appendix F. Actual letters, emails, and comment cards  
redacted to ensure privacy.*

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## **Appendix F: Responses to Scoping Comments**

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**FirstNet PEIS Scoping Comments**

Date Rec'd	Format	Name	Organization	Topic	Comment	Response
11/18/2014	Mail	Ellie L. Irons	Commonwealth of VA - Department of Environmental Quality	RFI	<p>Dear Ms. Pereira:</p> <p>This letter responds to the above Notice of Intent, which appeared in the November 12 Federal Register (Volume 79, Number 218) at pages 67156-67157 (hereinafter cited as "the Notice").</p> <p>The Department of Environmental Quality ("DEQ") is responsible for coordinating Virginia's review of federal environmental documents prepared pursuant to the National Environmental Policy Act ("NEPA") and responding to appropriate federal officials on behalf of the Commonwealth. DEQ also coordinates Virginia's review of federal consistency determinations and certifications prepared pursuant to the Coastal Zone Management Act ("CZMA") and the Virginia Coastal Zone Management Program ("VCP").</p> <p><b>DESCRIPTION OF PROPOSED ACTION</b></p> <p>According to the Notice, the First Responder Network Authority ("FirstNet") is a unit of the Department of Congress, created by the Middle Class Tax Relief and Job Creation Act of 2012 (Public Law 112-96, codified at Title 47, United States Code sections 1401 et seq.) and authorized to "take all actions necessary to ensure the building, deployment, and operation of an interoperable, nationwide public safety broadband network." The network is intended to "allow police officers, fire fighters, emergency medical service professionals, and other public safety entities to effectively communicate with each other across agencies and jurisdictions." (Notice, page 67157, center column).</p> <p>According to the Notice, FirstNet will prepare five regional Programmatic Environmental Impact Statements (PEISs) and conduct scoping meetings, notice of which will be given in the FirstNet web site (<a href="http://www.firstnet.gov">http://www.firstnet.gov</a>). Following completion of the PEISs, proponents of proposed projects will submit site-specific environmental documentation to determine whether a proposed project warrants a Categorical Exclusion, an Environmental Assessment, or an Environmental Impact Statement. The concept of tiering (see National Environmental Policy Act regulations at Title 40, Code of Federal Regulations, part 1508, section 1508.28) will be employed as FirstNet moves from the five PEISs to regional, basin-wide, or site-specific project considerations (Notice, pages 67156-67157).</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies to comply with all requirements.
11/18/2014	Mail	Ellie L. Irons	Commonwealth of VA - Department of Environmental Quality	Scoping / Request for copies of DPEIS and FPEIS	<p><b>ENVIRONMENTAL REVIEW UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT: PROJECT SCOPING AND AGENCY INVOLVEMENT</b></p> <p>While this Office does not participate in scoping efforts beyond the advice given herein, other agencies are free to provide scoping comments concerning the preparation of the NEPA document. Accordingly, we are sharing this response to the Notice, and copies of the Notice itself, with selected state and local Virginia agencies whose responsibilities may affect, or be affected by, the plans and/or projects considered in the PEIS covering the eastern states. These agencies are likely to include the following (note: starred (*) agencies administer one or more of the enforceable policies of the Virginia Coastal Zone Management Plan; see "Federal Consistency ..." heading, next):</p> <p>Department of Environmental Quality:          -Office of Environmental Impact Review          -Northern Regional Office*          -Piedmont Regional Office*          -Tidewater Regional Office          -Valley Regional Office          -Blue Ridge Regional Office          -Southwest Regional Office          -Division of Air Program Coordination*          -Division of Land Protection and Revitalization (formerly Waste Division)          Office of Stormwater Management*          Department of Conservation and Recreation Department of Health (Division of Water Programs)*          Department of Game and Inland Fisheries*          Virginia Marine Resources Commission* Department of Historic Resources Department of Forestry          Department of Transportation          Department of Mines, Minerals, and Energy          Virginia State Police          Department of Emergency Management.          In keeping with our regular practice, we will solicit comments from regional planning district commissions and localities when EISs, EAs, or federal consistency documents (again, see next heading) are prepared for programs or projects, based on their nature and geographic impacts.          In order to ensure an effective coordinated review of the PEIS, we will require at least 19 copies of it when it is published. This submission may include at least 3 printed copies and 16 CDs, or at least 3 printed copies and an electronic copy available for download at a web site or ftp site. If the PEIS addresses geographic reach or impacts of the program or projects, then it should include one or more U.S. Geological Survey topographic maps as part of its information. We recommend, as well, that project details unfamiliar to people outside FirstNet be adequately described in the PEIS.</p>	Due to the nationwide scope of our current programmatic analysis and the considerable size of the documents, it may not be possible for FirstNet to provide hard copies of the draft and final documents to all interested parties. However, the documents will be available for download on our website to all interested parties.
11/18/2014	Mail	Ellie L. Irons	Commonwealth of VA - Department of Environmental Quality	Coastal Zone Management Act	<p><b>FEDERAL CONSISTENCY UNDER THE COASTAL ZONE MANAGEMENT ACT</b></p> <p>Pursuant to the Coastal Zone Management Act of 1972, as amended, and the Federal Consistency Regulations (15 CFR Part 930), federal projects with reasonably foreseeable effects on Virginia's coastal uses or resources must be conducted in a manner which is consistent, to the maximum extent practicable, with the Virginia Coastal Zone Management Program (VCP). The VCP is comprised of a network of programs administered by several agencies.</p> <p>FirstNet must submit a federal consistency determination (FCD) which analyzes the coastal effects of the project in light of the enforceable policies of the VCP (first enclosure), and provides a commitment to comply with the enforceable policies. In addition, we invite FirstNet's attention to the advisory policies of the VCP (second enclosure). Requirements for the contents of FCDs are found in the Federal Consistency Regulations (15 CFR Part 930, Sub-part D, sections 930.39) and also in DEQ's Federal Consistency Information Package (available online at <a href="http://www.deq.virginia.gov/Portals/0/DEQ/EnvironmentalImpactReview/FederalConsistencyManual7.27.1.1.pdf">http://www.deq.virginia.gov/Portals/0/DEQ/EnvironmentalImpactReview/FederalConsistencyManual7.27.1.1.pdf</a>). The Federal Consistency Information Package defines Virginia's coastal zone, among other things.</p> <p>The Federal Consistency Regulations allow up to 60 days for our review of an FCD (15 CFR Part 930, Sub-part C, section 930.41(b)).</p> <p>The FCD may be submitted as a part of an EIS or separately, as you prefer. We recommend that the FCD for a particular project or plan be submitted with the Final EIS rather than the Draft EIS, in order that it reflect resolution of coastal issues that may arise during the comment period for the Draft EIS.</p> <p>In the event broadband network project proponents should seek FirstNet licensing or permitting for their projects, the Federal Consistency Regulations have slightly different requirements and time frames. Three examples of these differences will suffice here:</p> <ul style="list-style-type: none"> <li>• The federal consistency document is called a "federal consistency certification" rather than a "federal consistency determination."</li> <li>• Projects or plans subject to federal licensing or permitting must be consistent with the enforceable policies of the VCP; the qualifier "to the maximum extent practicable" applies only to direct federal actions.</li> <li>• The time frame for the state's response is 180 days, with a requirement that the state provide a progress report in 90 days and an explanation of the reason for further delay in the response.</li> </ul> <p>The Federal Consistency Regulations address federal licensing and permitting in Sub- part D (sections 930.50 through 930.66).</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies to comply with all requirements.

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11/18/2014	Mail	Ellie L. Irons	Commonwealth of VA - Department of Environmental Quality	Information on existing environment	<p>DATABASE LIST</p> <p>Below is a list of databases that may assist you in the preparation of the NEPA document:</p> <ul style="list-style-type: none"> <li>• DEQ Online Database: Virginia Environmental Geographic Information Systems</li> <li>Information on Permitted Solid Waste Management Facilities, Impaired Waters, Petroleum Releases, Registered Petroleum Facilities, Permitted Discharge (Virginia Pollution Discharge Elimination System Permits) Facilities, Resource Conservation and Recovery Act (RCRA) Sites, Water Monitoring Stations, National Wetlands Inventory <a href="http://www.deq.virginia.gov/ConnectWithDEQNEGIS.aspx">www.deq.virginia.gov/ConnectWithDEQNEGIS.aspx</a></li> <li>• DEQ Virginia Coastal Geospatial and Educational Mapping System (GEMS)</li> <li>Virginia's coastal resource data and maps; coastal laws and policies; facts on coastal resource values; and direct links to collaborating agencies responsible for current data <a href="http://128.172.160.131/gems2/">http://128.172.160.131/gems2/</a></li> <li>• DEQ Permit Expert</li> <li>Helps determine if a DEQ permit is necessary <a href="http://www.deq.virginia.gov/permitexpert/">www.deq.virginia.gov/permitexpert/</a></li> <li>• OHR Data Sharing System</li> <li>Survey records in the OHR inventory <a href="http://www.dhr.virginia.gov/archives/datasharingsys.htm">www.dhr.virginia.gov/archives/datasharingsys.htm</a></li> <li>• OCR Natural Heritage Search</li> <li>Produces lists of resources that occur in specific counties, watersheds or physiographic regions <a href="http://www.dcr.virginia.gov/naturalheritage/dbsearchtool.shtml">www.dcr.virginia.gov/naturalheritage/dbsearchtool.shtml</a></li> <li>• DGIF Fish and Wildlife Information Service Information about Virginia's Wildlife resources <a href="http://vawfs.org/fwis/">http://vawfs.org/fwis/</a></li> <li>• Environmental Protection Agency (EPA) Comprehensive Environmental Response, Compensation, and Liability Information System (CERCLIS) Database: Superfund Information Systems</li> <li>Information on hazardous waste sites, potentially hazardous waste sites and remedial activities across the nation, including sites that are on the National Priorities List (NPL) or being considered for the NPL <a href="http://www.epa.gov/superfund/sites/cursites/index.htm">www.epa.gov/superfund/sites/cursites/index.htm</a></li> <li>• EPA RCRAInfo Search</li> <li>Information on hazardous waste facilities <a href="http://www.epa.gov/enviro/facts/rcrainfo/search.html">www.epa.gov/enviro/facts/rcrainfo/search.html</a></li> <li>• EPA Envirofacts Database</li> <li>EPA Environmental Information, including EPA-Regulated Facilities and Toxics Release Inventory Reports <a href="http://www.epa.gov/enviro/index.html">www.epa.gov/enviro/index.html</a></li> <li>• EPA NEPAstisit Database</li> <li>Facilitates the environmental review process and project planning <a href="http://nepastisit.epa.gov/nepastisit/entry.aspx">http://nepastisit.epa.gov/nepastisit/entry.aspx</a></li> <li>If you have questions about the environmental review process and/or the federal consistency review process, please feel free to contact me (telephone (804) 698-4325 or e-mail <a href="mailto:ellie.irons@deq.virginia.gov">ellie.irons@deq.virginia.gov</a>) or John Fisher of this Office (telephone (804)698-4339 or e-mail <a href="mailto:john.fisher@deq.virginia.gov">john.fisher@deq.virginia.gov</a>).</li> </ul> <p>I hope this information is helpful to you.</p> <p>Ellie L. Irons, Program Manager Environmental Impact Review</p>	Thank you for your comment.

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Date Rec'd	Format	Name	Organization	Topic	Comment	Response
12/2/2014	Mail	Mark Alling	Commonwealth of VA - Department of Environmental Quality	Water Resources	<p>Dear Ms. Pereira:</p> <p>I have reviewed the Scoping for the above referenced project proposed by the National Telecommunications and Information Administration to prepare five regional Programmatic Environmental Impact Statements and conduct scoping meetings. FirstNet intends to build, deploy and operate an interoperable, nationwide public safety broadband network based on a single national network which will allow police, fire emergency medical and other professionals and entities to effectively communicate with each other across agencies and jurisdictions. PRO comments for this project are as follows:</p> <p>Water: Where building and deployment cross or impact surface and groundwater features, erosion and sediment controls should be properly implemented and maintained throughout all phases of construction. E &amp; S controls and Best Management Practices (BMPs) should be inspected/repaired before and after rain events. Please follow all standards and specifications under the Virginia DCR Erosion &amp; Sediment Controls Handbook (1992, 3rd Edition). DEQ recommends maximizing pervious surface areas and green spaces in the construction design to reduce runoff and the environmental impact associated with urban runoff.</p> <p>Please contact Allison Dunaway at (804) 527-5086 for questions dealing with permitting of construction in and near wetlands. Please contact Emilee Adamson at (804) 527-5072 for questions dealing with construction or industrial stormwater permitting.</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies to comply with all requirements.
12/2/2014	Mail	Mark Alling	Commonwealth of VA - Department of Environmental Quality	Waste	<p>Waste: Hazardous or solid waste materials generated should be tested and removed in accordance with the Virginia Hazardous Waste Management Regulations (9 VAC 20-60) and/or the Virginia Solid Waste Management Regulations (9 VAC 20-80). Please understand that it is the generator's responsibility to determine if a solid waste meets the criteria of a hazardous waste and as a result be managed as such. In addition, asbestos waste, lead waste, or contaminated residues generated must be handled and disposed of in accordance with the VSWMR or VHWMR as applicable. DEQ recommends that pollution prevention principles be implemented to reduce the amount of wastes at the source, such as the re-use and recycling of waste materials. If you have any questions concerning hazardous/solid waste management, please contact Jason Miller at (804)527-5028.</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies to comply with all requirements.
12/2/2014	Mail	Mark Alling	Commonwealth of VA - Department of Environmental Quality	Air	<p>Air: DEQ recommends following all air quality standard and specifications to reduce or avoid the emissions of VOCs, especially during periods of high ozone. Fugitive dust should be kept to a minimum, (9 VAC 5-40-5630 et seq). Permits may be required for any boilers or fuel-burning equipment. For further questions, please contact James Kyle at (804) 527-5047.</p> <p>Sincerely, Mark S. Alling Water Monitoring and Planning Manager</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies to comply with all requirements.
12/11/2014	Meeting (New Orleans)	Catherine Cargo	Orleans Parish Communications District (OPCD)	FirstNet outreach	Work on outreach to NENA APCO and their local chapters.	FirstNet will continue to provide information regarding the NEPA process to our stakeholders and provide opportunities for all interested parties to provide input during the release of the draft and final PEISs.
12/11/2014	Mail and Email	Ronald P. Spark, M.D.	Public	Biological Resources	<p>Ms. Pereira:</p> <p>For over a decade I've been one of the hundreds of Tucsonans who daily walk Tucson's Tumamoc Hill. Sited in the midst of Downtown, this volcanic outcropping and Sonoran desert respite affords both the layman and the scientist the engagement and delight in a more than 100 years of reclaimed natural setting. In particular, I'm continually amazed when observing the broadly diverse and robust desert plants and animal species.</p>	Thank you for your comment.
12/11/2014	Mail and Email	Ronald P. Spark, M.D.	Public	Cultural / Historic resources	Its built structures are of a recognized historic character and the trenches and rock art recall the place as being sacred to the indigenous and extent peoples.	Thank you for your comment.
12/11/2014	Mail and Email	Ronald P. Spark, M.D.	Public	Aesthetics / Recreational Use	<p>As a physician, I am touched by seeing some walkers using canes, braces and, even oxygen, to ascend and absorb the meaningfulness of the Hill. The place has an innate inspiring character.</p> <p>I trust the National WiFi Network will ensure the Public Safety but we must not allow any footprint to lessen the intrinsic public, scientific and cultural value of Tumamoc Hill.</p> <p>Sincerely yours, Ronald P. Spark, M.D. Past-President, Pima County Medical Society Clinical Associate Professor, University of Arizona College of Medicine</p>	Thank you for your comment.

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12/15/2014	Email	Michael Rosenzweig	University of Arizona	NOI	<p>Dear Ms. Pereira, Please accept the attached pdf file as my comment on the proposed Firstnet system in Pima County, Arizona.</p> <p>BTW I met with four Firstnet people in Tucson at the scoping meeting. They brought professionalism and interest to it. I thought they included their contact information in the material they gave me, but I could not find it when I returned home. The first name of the leader was Genevieve and I would like very much to get in touch and thank her.</p> <p>Sincerely, Mike Michael I. Rosenzweig Director Tumamoc: People &amp; Habitats Professor University of Arizona</p>	Thank you for your comment.
12/15/2014	Email Attachment	Michael Rosenzweig	University of Arizona	Cultural / Historic resources	<p>Because of its location in the heart of Tucson, and its prominent elevation and many straight-line radio access paths to the city, this US National Historic Landmark was selected as one of the sites for a transmission tower in the Pima County system to insure interoperability among first responders. The tower is now working as legs for numerous antennae. But its construction was an historic mistake because it greatly erodes the integrity of the NHL.</p> <p>As it seems likely that FirstNet's new technology will collocate by default on the Tumamoc tower, I believe FirstNet needs to learn about the NHL so that its decisions will be fully informed and not directed to such a default position for lack of background data.</p> <p>I add that the County of Pima &amp; The University of Arizona agreed that as new technology was needed to replace the old on Tumamoc, the new would be deployed elsewhere and the old removed from Tumamoc Hill.</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies to comply with all requirements.
12/15/2014	Email Attachment	Michael Rosenzweig	University of Arizona	Cultural / Historic resources	<p>Ownership The Landmark has four major ownership divisions:  <ul style="list-style-type: none"> <li>• 350 acres of fee simple land: owner, U of A</li> <li>• 200 acres from the original U of A land grant</li> <li>• 300 acres open space: owner, Pima County</li> <li>• 20 acres of former landfill: owner, City of Tucson (capped with an ecologically sound, evapotranspirative layer of soil that makes it available for experiments)</li> </ul> </p>	Thank you for your comment.
12/15/2014	Email Attachment	Michael Rosenzweig	University of Arizona	Biological Resources	<p>Ecology</p> <p>Founded as The Carnegie Desert Botanical Laboratory in 1903, it instantly became a leader in ecological research. In 1975, the US Department of the Interior designated part of it and some of its structures a US National Historical Landmark. In 1981, the State of Arizona designated the Hill an "Environmental Research Natural Area."</p> <p>Most of what the world knows about the physiology and ecology of Arizona's iconic saguaro cactus comes from research that began on Tumamoc Hill in 1903 and continues to this very day. In 1985, University and USGS investigators were finally able to establish the nature of the sporadic reproduction of saguaros — it had taken us 80 years!</p> <p>More recently, the Hill hosted the discovery that the isotope ratios of saguaro cactus spines allow us to measure, for the first time, the climate of the Sonoran Desert during the past two centuries. And in 2014, one of its saguaros provided a tissue sample that resulted in the first genome description of any cactus species in the world.</p> <p>Tumamoc Hill is the site of nine plant ecology study quadrats that date from 1906 and are the world's oldest permanent ecology study plots. From 2010-2012, all quadrats were resurveyed with modern optical and digital tools, given GPS coordinates and recensused. All the data of the previous century-plus were digitized, filed with the National Park Service and made publicly available via the Ecological Society of America.</p> <p>Beginning in 1982, long transects were established to record and understand the ecology of more than 100 species of annuals (wildflowers). We now have an unbroken and growing record of 33 generations, capable of detecting subtle variations in environmental conditions such as water regime and weather.</p>	Thank you for your comment.
12/15/2014	Email Attachment	Michael Rosenzweig	University of Arizona	Cultural / Historic resources	<p>Conservation</p> <p>In 1987, the Interior Dept added the remainder of the 680-acre scientific reservation to the landmark in recognition of the Hill's importance to conservation. In 1906, it banished its active stone quarries and excluded domestic grazers and browsers with a 5(+) mile-long fence in order to allow the desert to return to a natural state. Thus was established the world's first restoration ecology project. It is the Hill's conservation status, one of national and international historical significance, whose integrity is severely damaged by the tower.</p>	Thank you for your comment.
12/15/2014	Email Attachment	Michael Rosenzweig	University of Arizona	Cultural / Historic resources	<p>Archaeology</p> <p>For nearly half a century, research on Tumamoc Hill has produced archaeological knowledge about the people who farmed in Tucson starting thousands of years ago. Archaeological remains on the Hill include massive, 2300-yr old trincheras (encircling walls and terraces), more than 150 structures, an array of almost 1000 petroglyphs, and an elaborate prehistoric trail system. The Hill was the site of three successive hilltop settlements with masonry architecture. Very recent work with the isotopes in potsherds shows that, for two millennia or more, Native Americans have been gathering together on the Hill from all around the Tucson basin. In 2010, the US Department of the Interior designated the land and its remains, The Tumamoc Hill Archaeological District of the United States of America.</p> <p>The present communications tower and its associated structures sit on the mesa top where much of the most charismatic ruins are located. Archaeologists must quickly rebury any new excavation to protect it. Any hope of creating an educational experience for visitors is thwarted.</p>	Thank you for your comment.
12/15/2014	Email Attachment	Michael Rosenzweig	University of Arizona	Cultural / Historic resources	<p>Significance to Native American Cultures</p> <p>Tumamoc Hill is a centerpiece of the history of the ancestors of Arizona's O'odham, including the Tohono O'odham Nation, the Ak Chin Indian Community, the Gila River Indian Community, and the Salt River (Pima-Maricopa) Indian Community. The Hill is sacred to all of them. The same is true of the Hopi Nation, and the Pasqua Yaqui, too. Both the University of Arizona and Pima County respect the sensitivity and traditions of native people regarding Tumamoc Hill. The university and the Nations agreed in writing that the footprint of western culture on the Hill would not be increased. When their permission was sought by the county to erect the current tower, they consented only because they were told it was necessary to save lives. Absent that consideration, they would surely prefer to see the tower removed.</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.

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12/15/2014	Email Attachment	Michael Rosenzweig	University of Arizona	Aesthetics / Recreational Use	<p>Walking the Hill</p> <p>Each week, thousands of people wend their way along the Tumamoc Hill Road, ascending 800 feet to its mesa top. Without promotion or marketing, "Walking the Hill" has become a Tucson institution woven into the fabric of the community, uniting people from every socio-economic group within our region. The Hill hosts approximately 300,000 to 500,000 walking trips per year. For many, their Tumamoc walk has become a daily ritual.</p> <p>Recently the University of Arizona College of Medicine has begun work on a research project focused on the walkers. It studies the effects of the green desert environment in the midst of an urban heat island on the allostatic load of stress, well-being and spirituality.</p> <p>Meanwhile, despite the crowds, the Hill has no security apparatus or personnel. Instead it relies on the honor and sound judgment of walkers to stay off the mesa top itself. But the need for good security for the FirstNet system would seem to promise tension between the need for reliable interoperability and the demand for liberal public use.</p> <p>Put simply, if FirstNet's needs interfere with easy access to Tumamoc by walkers, the result will be a sustained gnashing of teeth.</p>	Thank you for your comment.
12/15/2014	Email Attachment	Michael Rosenzweig	University of Arizona	Cultural / Historic resources	<p>SUMMARY OF IMPACTS</p> <p>Use of the mesa top of Tumamoc Hill for a communication tower to support interoperability in Pima County will have the following negative impacts.</p> <ul style="list-style-type: none"> <li>• It will establish, far into the future, a communication superstructure that amounts to a serious cultural, environmental and historical mistake.</li> <li>• It will erode the integrity of a National Historic Landmark.</li> <li>• It will prevent important archaeological resources from being made available to educate the public.</li> <li>• Either it will risk a clash between public use of the Hill for recreation, or else it will occupy an area without security.</li> <li>• It will frustrate the desire of six Native American nations to reduce the presence of unwelcome technical apparatus on a Hill invested with deep religious significance.</li> </ul> <p>Michael Rosenzweig 15 December 2014</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.

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12/15/2014	Email	Paul Dayton	University of California San Diego	Cultural / Historic resources	<p>Dear Friends,</p> <p>this note relates to the importance of including Tumamoc Hill, in Tucson, Arizona, in FirstNet. I write to support the inclusion of this facility. As you know it has several historic buildings but its most important ongoing legacy is the science.</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/15/2014	Email	Paul Dayton	University of California San Diego	Biological Resources	<p>It very much is the home of the science of desert ecology starting over 100 years ago with Carnegie support. Over the century some of the best desert ecologists in the world spent their careers there developing a unique understanding of the evolution of a desert ecosystem over the last 100 thousand years. In recent time they established unique baseline data on desert plants that span most of the century. They organization is unique and the facility priceless. I hope you can help protect it with FirstNet.</p> <p>Sincerely Paul Dayton</p>	Thank you for your comment.
12/16/2014	Email	Rich Watson	Public	Cultural / Historic resources	<p>I recently heard about the future involvement of First Net on Tumamoc Hill and am encouraged that the Federal Government is concerned about secure communications. However, on a more personal level, I am concerned about maintaining the integrity of this unique and irreplaceable historical and scientific resource. Unique, in part, because it has been guarded, researched and protected by the University of Arizona and many others for over a century.</p> <p>In ancient times, this was home to native people long before Europeans imagined our existence and a strong remnant of those people is still intact on the property. In addition, severe encroachment by recreational users (welcomed with sensitivity), the City of Tucson and high traffic on the perimeter causes substantial risk to this delicate property.</p> <p>Prior to construction of the new towers on Tumamoc, I was personally involved in discussions relating to use, impact and future maintenance. When bonds are passed, funding is available and agreement reached between multiple agencies and jurisdictions it is easy to make well intended promises. Such promises were made prior to the tower development with good intentions. History dictates that memories become short and promises are forgotten over time.</p> <p>In this particular case, it is my sincere hope that you take seriously your new responsibility as a joint caretaker of the history, management and protection of Tumamoc. Once damaged or destroyed, it can never be restored. Consequently, it is imperative that all who are caretakers never lose vigilance as we move into the future. Please respect the ancient people, the century of scientific study and Dr. Michael Rosenzweig, who is a highly qualified and deeply invested steward of this property.</p> <p>Rich Watson</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/16/2014	Email	Russell P. Long, CRB, CLHS	Long Realty Company	Cultural / Historic resources	<p>To Whom It May Concern,</p> <p>Tumamoc Hill has been a fixture in our family since the very early 1900's when our great grandfather, Burton Bovee, began working there. Long before we every visited there and as children our mother told us tales of Burton working there, riding his horse and mule all over the Tucson basin collecting samples and specimens. As adults we became aware of the cultural and historical significance of the site as a result of the approximately 3,000 year old Hohokam Indian village atop the hill as well the historic volcanic stone buildings and their current uses. Certainly Tumamoc Hill is a local and national treasure worthy of preservation. Please feel free to contact me if you would like to discuss this or have questions. Thank you.</p> <p>Russell P. Long, CRB, CLHS</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/19/2014	Email	R. Brooks Jeffrey	University of Arizona	Cultural / Historic resources	<p>Ms. Pereira:</p> <p>I'm writing at the request of Dr. Michael Rosenzweig to express my advocacy on behalf of Tumamoc Hill's preservation as a rich cultural landscape. Instead of a long essay defining cultural landscapes (if you don't already know) and recognizing Tumamoc Hill's significance as a multi-layered tell of natural and cultural features, I've attached a presentation I've given many times as a vehicle to educate the various constituencies for whom Tumamoc Hill holds value.</p> <p>I hope this assists to inform any future decisions that may impact Tumamoc Hill. Feel free to contact me directly with any specific questions.</p> <p>Sincerely, R. Brooks Jeffrey</p>	Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/20/2014	Mail	Michael Kaiserman	Public	Cultural / Historic resources	<p>Dear Ms. Pereira,</p> <p>I am writing to you to encourage your organization to join forces with many other organizations that are already supporting members for the preservation of the archaeology, cultural history and ecology of Tumamoc Hill. It is my perception that the FirstNet activity would provide a beneficial service to significantly broaden the exposure Tumamoc Hill would have nationally.</p> <p>As I have travelled to Egypt, Greece, Turkey, Israel , Great Britain, Norway, and Mexico were I have visited many of the historical and ancient wonders, not to mention many sites here in the U.S., I believe Tumamoc Hill ranks up there with all these sites in the same historical and ancient context. I trust your organization will come to the same conclusion and move forward with plans to include Tumamoc Hill in the FirstNet activity.</p> <p>Thank you very much for your consideration.</p> <p>Michael Kaiserman Engineering Fellow, Raytheon Missile Systems (Retired)</p>	Thank you for your comment.
12/22/2014	Email	Bruce Hilpert	Public	Cultural / Historic resources	<p>I urge you to protect the cultural resources on the top of Tumamoc Hill in Tucson. This historic/prehistoric site has unique constructions that give insight into the prehistory of the Southwest. Further constructions endangers these resources.</p> <p>I urge you to limit construction on this site to areas that have been previously disturbed and allow no further destruction of these resources.</p> <p>Thank you, Bruce Hilpert</p>	Thank you for your comment.

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Date Rec'd	Format	Name	Organization	Topic	Comment	Response
12/22/2014	Email	Charles Broder	Public	Cultural / Historic resources	Allowing first responders to communicate with each other is a very important goal. I sincerely hope that this goal will not be allowed to compromise the important cultural remnants and significance of Tumamoc Hill. It is a treasure which must be preserved.	Thank you for your comment.
12/22/2014	Email	Gayle Harrison Hartman	Public	Cultural / Historic resources	<p>FirstNet,</p> <p>I don't know exactly what you are planning for Tumamoc Hill but you need to know that it is a National Historic Landmark and, as an archaeological site, is listed on the National Register of Historic Places.</p> <p>The hill was used by prehistoric people at least as long ago as 500 B.C. The summit is surrounded by low basalt "walls" (linear rock piles extending for many yards), and the summit itself contains dozens of prehistoric pit structures. There are also over 700 examples of prehistoric rock art on the summit and slopes of the hill. These were recently recorded and published as "Tumamoc Rock Art Revisited: With a Focus on Temporal Affiliation and Management" by Gayle Harrison Hartmann and Peter C. Boyle. The monograph was part of Arizona State Museum Archaeological Series No. 208; the entire publication was entitled New Perspectives on the Rock Art and Prehistoric Settlement Organization of Tumamoc Hill, Tucson, Arizona, edited by Gayle Harrison Hartmann and Peter C. Boyle.</p> <p>It is extremely important that no damage be done to the basalt "walls," (trincheras in Spanish), pit house structures, rock art and other manifestations of prehistoric or historic activity on the hill.</p> <p>If you have not already done so, please contact Todd Pitezel at the Arizona State Museum as soon as possible. He is the archaeologist in charge of protecting the hill. pitezel@email.arizona.edu.</p> <p>Thank you, Gayle Harrison Hartmann</p>	Thank you for your comment.
12/22/2014	Email	Georgia Erdmann	Arizona Site Steward	Cultural / Historic resources	<p>Thank you for your consideration when you make decisions regarding placing a tower on Historic Tumamoc Hill. It is a great relief to know that you will use the pads that are already in existence and thus save some endangerment of this ancient site. It is such a great opportunity to work together to honor the ancient archaeology of the area.</p> <p>Thank you again. Respectfully, Georgia Erdmann</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/22/2014	Email	Jane Levin	Public	Cultural / Historic resources	<p>I am a volunteer archeological site steward in Pima County. I am writing to encourage you to restrict any construction on the antenna pads on Tumamoc Hill. The trincheras there are ancient and precious and need to be protected.</p> <p>Thank you for your consideration. Sincerely, Jane Levin</p>	Thank you for your comment.
12/22/2014	Email	Jaye S. Smith	Public	Cultural / Historic resources	<p>Dear Ms. Pereira:</p> <p>As a Pima County resident and an avid archaeological enthusiast, I am extremely concerned about the proposed impact to the most important site, both historically and archaeologically, in Pima County - Tumamoc Hill. This site is extremely important for ongoing research about Hohokam Cultures, as well as immense local historical value to many of Pima County's first pioneer families, the University of Arizona, the UA School of Anthropology and the Arizona State Museum.</p> <p>Please help protect Tumamoc Hill by limiting the proposed construction to the existing antenna pads. I fully realize the importance of providing advanced communications for our first responders, but it is also important to protect the ancient trincheras sites and petroglyphs such as those found on Tumamoc Hill that we can never replace or restore once impacted. So many important archaeological sites in Pima County have been lost in recent years; we just can not afford to lose a treasure as important as Tumamoc Hill. As a proud member the Arizona State Museum, the Arizona Archaeological and Historical Society and Archaeology Southwest, I am committed to offer whatever help or assistance is needed to develop a plan that will provide the necessary communications structure and preserve this irreplaceable Hohokam site.</p> <p>Thank you for your attention: Sincerely: Jaye S. Smith</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/22/2014	Email	Judith Reisman	Site Steward	Cultural / Historic resources	<p>As an archeological site steward, I help protect a very old Hohokam site from theft and vandalism. I am in complete support of creating a first responders wifi network, but respectfully ask that any new hardware installations on Tumamoc Hill be confined to existing hardware sites so that the rest of this precious archeological site remains. It is wonderful to think of using the internet to help our first responders in disasters and emergencies. It is also wonderful that you'all are so ready to be partners in preserving the rest of the aspects of this site.</p> <p>Thank you, Judith Reisman, site steward</p>	Thank you for your comment.
12/22/2014	Email	Kaitlin Meadows & Albert Lannon	Wild Heart Ranch	Cultural / Historic resources	<p>Please limit FirstNet construction on Tucson's Tumamoc Hill to existing antenna sites so that new footprints are not created. Any new work away from already-disturbed areas will impact negatively on ancient archeological sites, sites that contain habitation and farming areas, rock art with an amazing number of solstice and equinox markers, and artifacts that continue to help archaeologists understand the ancient history of this important area.</p> <p>Several years ago we helped document some of those solstice markers. To stand on the top of Tumamoc Hill as the sun rose in the east and the full moon set in the west on the Winter Solstice and see the sudden light -- "sun daggers" -- on petroglyphs mark the changing of the season was a magical and humbling experience. It speaks to the knowledge, skill, and ability of those ancient people as something well worth preserving.</p> <p>Thank you, Kaitlin Meadows &amp; Albert Lannon</p>	Thank you for your comment.

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Date Rec'd	Format	Name	Organization	Topic	Comment	Response
12/22/2014	Email	Katherine Cerino	Arizona Archaeological and Historical Society	Cultural / Historic resources	<p>First, I am pleased with the Firstnet efforts - this seems like a very sensible idea. The purpose of this note is to bring to your attention the importance archaeologically of Tumamoc Hill in Tucson. The Hill has already been impacted by many towers some of which are no longer in use. I would like to ensure that the development you carry out on the Hill uses the existing disturbed footprint rather than adding to it. The Hill is archaeologically unique in the Tucson Basin in that it has some of the earliest habitation sites dating to 500 BC and some of the earliest pottery in the Basin. It was later used by the Hohokam people who pecked rock art over a great deal of the hill concentrating on the top where developmental impact is greatest. In addition, there are unique prehistoric walls around the hill. It was clearly an important and sacred place in the past and if you go up there today and simply look at the spectacular 360 degree view without even considering the importance of the past it is obviously a special place.</p> <p>Thank you, Katherine Cerino</p>	Thank you for your comment.
12/22/2014	Email	Lance Trask	Public	Cultural / Historic resources	<p>Dear Sir or Madam:</p> <p>I applaud the government for coming up with plans to have Wi-Fi available to first responders and an agency to oversee those plans. Communication at the beginning of an event is critical and can make the difference between life and death. It is likely that antennae(s) or repeaters will be considered at a location called Tumamoc Hill. It is ideal because it has a 360 degree view of a considerable portion of Southern Arizona. It is also on the National Register and holds valuable cultural resources. Some disturbances have already occurred on Tumamoc Hill and I urge you to consider placing any equipment in areas already impacted. Access to the top of the hill is via existing roads and these roads should be adequate for transporting and installing the equipment for the proposed Wi-Fi system. Currently the top of the hill is off limits and behind locked gates, so any installed equipment will be fairly well protected.</p> <p>I also urge you to work closely with the archaeological community within the Tucson area as they can provide expertise and work with the agency so its needs are met and the cultural resources are preserved for the future.</p> <p>Thank you very much, Lance K. Trask</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/22/2014	Email	Linda Stelljes	Public	Cultural / Historic resources	<p>As a historically and archaeologically sensitive area, I am asking that FirstNet help protect the ancient trincheras on Tumamoc Hill by restricting construction to the existing antenna pads, so our first responders can communicate while still allowing Pima County and the University of Arizona to protect this important place of the past. I am a member of Arizona State Parks Site Stewards, and we are all volunteers who devote our time and energy to preserving, monitoring and protecting historical Hohokam and other paleo-Indian sites in Arizona. Human history in the Southwest (and everywhere) is essential to understanding our ancestors and we should all be stewards of the sites that reveal clues to human civilization and how people lived in the past. What may not look important to the untrained eye can hold great significance to our understanding.</p> <p>Thank you for your attention on this matter. We can all work together to preserve and protect our history.</p> <p>Sincerely, Linda Stelljes</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/22/2014	Email	Peggy Wenrick	Arizona Site Steward	Cultural / Historic resources	<p>I understand how important the project proposed for installation on Tumamoc Hill in Tucson, Arizona is for promoting quick response in emergencies. However, I want to stress the need for careful planning and execution of the project.</p> <p>I am an Arizona Site Steward who regularly monitors the condition of the archeological district elements on Tumamoc. Even after many visits, I am still awed to realize that early peoples created structures and lived in this special space.</p> <p>I request that every effort be made to minimize the footprint of the upcoming work and strongly urge the structure(s) be confined to the antennae pads already existing.</p> <p>Thank you for the opportunity to comment. Peggy Wenrick</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/22/2014	Email	Peter J. Baum	Public	Cultural / Historic resources	<p>Hello Ms Pereira:</p> <p>Please accept my fervent plea that any Firstnet access to, and construction on, Tumamoc Hill be done with the utmost sensitivity to the petroglyphs and ruins of Tucson's first public architecture, going back over two thousand years!</p> <p>I've called Tucson home for fifty years and worked downtown for the last 38. I've had the privilege of spending time atop the hill with extraordinary experts Paul and Suzi Fish, as well as fascinating petroglyph experts. I've sadly watched Tumamoc being "loved too much" by looters, and "loved too little" by Pima County's and the University of Arizona's budgetary stinginess. Too much irreversible damage has been done already.</p> <p>Please encourage Firstnet to be extraordinarily sensitive to the unique culture treasures still left on Tumamoc, minimize work to existing pads and overall trod with the lightest footprint possible.</p> <p>Thank you Peter J. Baum</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/22/2014	Email	Robert Wenrick	Arizona Site Steward	Cultural / Historic resources	<p>I understand how important the project proposed for installation on Tumamoc Hill in Tucson, Arizona is for promoting quick response in emergencies. However, I want to stress the need for careful planning and execution of the project.</p> <p>I am an Arizona Site Steward who regularly monitors the condition of the archeological district elements on Tumamoc. Even after many visits, I am still awed to realize that early peoples created structures and lived in this special space.</p> <p>I request that every effort be made to minimize the footprint of the upcoming work and strongly urge the structure(s) be confined to the antennae pads already existing.</p> <p>Thank you for the opportunity to comment. Robert Wenrick</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/23/2014	Email	Denise Waldo	Pima County Procurement	Cultural / Historic resources	<p>Please help protect the ancient trincheras on Tumamoc Hill by restricting construction to the existing antenna pads, so our first responders can communicate while still allowing Pima County and the University of Arizona to protect this important place of the past. My husband &amp; I have been involved in a volunteer program to help protect archaeology sites for years. We are lucky in Arizona to have many wonderful &amp; important sites, Tomamoc Hill being one of them. We respectfully ask that you consider the adverse impact your project could have on this site &amp; do all you can to help protect it.</p> <p>Thank you. Denise Waldo, CPPB</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.

**FirstNet PEIS Scoping Comments**

Date Rec'd	Format	Name	Organization	Topic	Comment	Response
12/23/2014	Email	Fran Maluri	Public	Cultural / Historic resources	<p>Dear Ms. Amanda Pereira:</p> <p>I am a resident of Tucson, Arizona and I am writing to ask you to minimize the impact on Tumamoc Hill in Tucson, AZ during the construction of the FirstNet communication system. This is an extremely rich Archaeological site, one of the most important in the Tucson area. There is much on the mountain that could still inform us about our early ancestors and those features and artifact should not be disturbed.</p> <p>I understand the value of the FirstNet communication being put in place and support the project as long as the land where current antenna pads exist is used for the work. Please do not disturb any of the rest of this site, the archaeological site and any of the natural features and environment. Let's do this work so that the area where our prehistoric ancestors lived, worked, worshipped and recreated is untouched</p>	<p>FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.</p>
12/23/2014	Email	Fran Maluri	Public	Biological Resources	<p>and where native plants, animals, insects and birds continue to enjoy this natural area within Tucson. What is disturbed cannot be brought back again and will no longer be available as natural habitat and for future research and better understanding of the past.</p> <p>Thank you.</p> <p>Sincerely,</p> <p>Fran Maluri</p>	
12/23/2014	Email	John A. Armstrong	Public	Cultural / Historic resources	Please help preserve areas of archaeological interest on Tumamoc Hill in Tucson, Arizona by limiting construction to existing antenna pads.	<p>FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.</p>
12/23/2014	Email	Keith Bagwell	District Five Pima County Supervisor	NOI	<p>Ms. Amanda Pereira,</p> <p>Please see the attached letter, submitted on behalf of District Five Pima County Supervisor Richard Elias as comments on activities FirstNet is considering with regard to Tumamoc Hill in Tucson, Arizona. The original letter will be sent to you via postal mail.</p> <p>Yours truly,</p> <p>Keith Bagwell</p>	<p>FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.</p>
12/23/2014	Email	M. Nichols	Public	Cultural / Historic resources	<p>Tumamoc Hill is a critical site of an ancient inhabited area, 10,000 plus years ago, in North America. There is only one other site similar to this one, in Sonora, Mexico. It is imperative that old pads be used for the towers, protecting the areas that have not been disturbed. This site is not only a treasure for the residents of Tucson and the University of Arizona, it is a treasure on the North American Continent. Your help in protecting this site is invaluable and will become an excellent public relations tool as your company expands.</p> <p>Thank you for becoming partners in protecting such a unique and ancient example of early civilization in the Americas.</p> <p>M. Nichols</p>	<p>FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.</p>
12/23/2014	Mail	Richard Elias	Pima County Board of Supervisors	Cultural / Historic resources	<p>Dear Ms. Pereira,</p> <p>It has come to my attention that FirstNet activities might have an impact on Tumamoc Hill, an iconic landmark that towers over the west side of the Tucson metropolitan area, in the Pima County District that I am elected to represent.</p> <p>Tumamoc Hill is a very special place. As a result the Pima County Board of Supervisors, upon which I serve, bought 320 acres of land on and around the hill in 2009 to protect it from development and unsuitable uses. There are now 860 acres of land on and around the hill protected in perpetuity.</p> <p>This hill was inhabited by Native Americans for thousands of years, ancestors of today's Tohono O'odham Nation members, and carries an O'Dham name, Tumamoc, which is their word for horned lizard. Remains of their residency and farming on the hill are visible and subject of substantial study.</p>	<p>FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.</p>
12/23/2014	Mail	Richard Elias	Pima County Board of Supervisors	Biological Resources	<p>The Carnegie Foundation established a Desert Botanical Laboratory on Tumamoc Hill in 1903 to study scientifically the unique flora of the Sonoran Desert, and the buildings associated with it are together a National Historic Landmark. A University of Arizona operation since 1960, the laboratory has studied desert flora continuously for longer than any other facility in the world. Its records are priceless.</p>	<p>Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.</p>
12/23/2014	Mail	Richard Elias	Pima County Board of Supervisors	Aesthetics / Recreational Use	<p>Tumamoc's unique shape and urban presence set it off as a unique and special sight for area residents and their visitors. The narrow, winding road up it leading to the laboratory has become a very popular exercise path for thousands of local residents.</p> <p>Tumamoc Hill is a special iconic feature that deserves protection and its many fragile features require careful treatment.</p> <p>Sincerely</p> <p>Richard Elias</p> <p>District Five Pima County Supervisor</p>	<p>Thank you for your comment.</p>
12/23/2014	Email	Sherry Massie	Public	Cultural / Historic resources	<p>Dear Ms. Pereira,</p> <p>I understand that FirstNet is a federal program which will allow first responders all over the U.S. to communicate with each other, as needed, by deploying a new national Wi-Fi network using a reserved public safety broadband range. I think this is a wonderful goal for our nation, but I realize this may also impact a very important historical/archaeological site - the ancient trincheras on Tumamoc Hill in Tucson, AZ.</p> <p>Would you please consider restricting construction to the existing antenna pads so that as little impact as possible occurs to this historic area?</p> <p>Although I have lived in Tucson for 13 years, I only recently visited this site through the auspices of the Arizona Archaeological and Historical Society. I had no idea that there were trincheras there dated to 300 B.C., and that there was evidence of Hohokam settlement dating to 800 A.D. I saw some amazing rock art, as well as evidence of solar markers and alignments.</p> <p>It's an impressive site so close to a major urban area, and one that needs to be preserved for everyone to be able to have same opportunity as I had to learn and enjoy part of our southwestern legacy.</p> <p>I hope you will be able to complete your Wi-Fi goal as well as helping preserve this important landmark.</p> <p>Thank you for your consideration.</p> <p>Sincerely yours,</p> <p>Sherry Massie</p>	<p>FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.</p>

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Date Rec'd	Format	Name	Organization	Topic	Comment	Response
12/24/2014	Email	Aaron D. Flesch, Ph.D.	University of Arizona	Cultural / Historic resources	<p>Dear Ms. Amanda Pereira:</p> <p>It has come my attention that the activities of Firstnet may eventually affect the ecological, social, and cultural values of Tumamoc Hill. Thus, I wanted to write to you to express the value of Tumamoc so that this information can be applied when evaluating the potential impacts of any proposed Firstnet activities on or around Tumamoc. Tumamoc Hill is a National Historic Landmark, a U.S. Archaeological District, and its value to the local, regional, national, and global communities are immense.</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/24/2014	Email	Aaron D. Flesch, Ph.D.	University of Arizona	Biological Resources	<p>As an ecologist that works on the Hill, and as a member of the Tucson community that walks the Hill and helps interpret its natural history and ecology to the public, I can speak specifically about Tumamoc's ecological and social values.</p> <p>In the first decade of the 1900s, some of our nation's first ecologists were tasked with locating a site to study desert plants and placing what would become the US' first ecological research station. At that time when the landscape was largely undeveloped and options for placing the stations nearly unlimited, they considered sites in Arizona, New Mexico, California, and the neighboring Mexican states of Sonora and Chihuahua. In the end, they chose Tumamoc for the site because of its remarkable diversity, exceptional natural qualities, and the fact that the Hill and surroundings included a large number of plant communities for study. Those facts speak to the uniqueness and incredible value of the Hill and the natural vegetation that still covers it. For the next 100 years scientists working on the Hill have made immeasurable contributions to our understanding of how the natural world is structured and how it functions, and those activities continue to this day under the leadership of Director Rosenzweig.</p>	Thank you for your comment.
12/24/2014	Email	Aaron D. Flesch, Ph.D.	University of Arizona	Aesthetics / Recreational Use	<p>As the surroundings around the Hill have changed over the last 100 years, the values of Tumamoc have grown. Tumamoc sees tens or perhaps hundreds of thousands of visitors each year of all ages and backgrounds. Many of those visitors live in a suburban or urban environment where they have little opportunity to experience the Sonoran Desert in its natural state and to connect with nature on deeper spiritual and aesthetic levels. Those qualities and experiences are offered by Tumamoc because of its close proximity to those populations and the accessibility the University of Arizona and the station's Director have provided.</p> <p>Please consider the remarkable and multifaceted values of Tumamoc Hill and the Desert Laboratory in your plans and proposals related to the Firstnet project. Feel free to contact me at the address below if I can be of help.</p> <p>My regards Aaron D. Flesch, Ph.D.</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/24/2014	Email	Brian Metcalf	Public	Cultural / Historic resources	<p>Ms. Amanda: I am contacting you regarding the planned update of the communications infrastructure on Tumamoc Hill for first responders. Tumamoc is almost in the heart of Tucson. It is been a protected area of biological research for over a century, contains invaluable archaeological artifacts that are well over 2000 years old. I ask you to please protect those irreplaceable resources for future generations. Please restrict your construction activities to existing antenna pads. Thank you.</p> <p>Brian Metcalf</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.

**FirstNet PEIS Scoping Comments**

Date Rec'd	Format	Name	Organization	Topic	Comment	Response
12/24/2014	Mail	Courtney Rose, PhD.	Pima County Sustainability and Conservation	Cultural / Historic resources	<p>Dear Ms. Pereira:</p> <p>This letter is a response to the request for comments on the proposed undertaking published in the Notice in the Federal Register (Vol. 79, No. 218). Tumamoc Hill has several important federal and state designations. Comprised of some 870 acres, it is an Archaeological District listed in the National Register of Historic Places and the Desert Laboratory was designated a National Historic Landmark in 1965. In 1976, the Desert Laboratory and Tumamoc Hill were together designated a National Environmental Study Area by the Department of Interior; and designated by the State of Arizona as a State Scientific and Educational Natural Area in 1981. Tumamoc Hill is also considered a traditional cultural property and ancestral site to local Tribes.</p> <p>Tumamoc Hill's peak rises to an elevation of 3,108 ft (947 m) above sea level. Located just west of downtown Tucson in T14S, R13E, Sections 9, 10, 16, and 15, the preservation of its cultural and scientific significance is of great importance to the local community and at a national level. Land ownership includes the University of Arizona on behalf of the Board of Regents, Pima County, Arizona State Land Department, and the City of Tucson.</p> <p>Archaeological surveys of Tumamoc Hill began in the 1970s followed by subsequent limited archaeological excavations. Known as Cemamagi Do'ag in O'odham, Tumamoc Hill, archaeological site designated AA:16-6(ASMP), is known to have multiple prehistoric occupations that left behind remnants of large rock walls (trincheras), petroglyphs, agricultural fields, pithouses, and O'odham cemeteries.</p> <p>A recent undertaking on Tumamoc Hill included the consolidation of wireless facilities and replacing several towers with a single communications tower (by the Pima County Wireless Integrative Network (PCWIN) project implemented in 2014). As the construction included consolidation and the dismantling unused buildings, the overall footprint was reduced. State, Federal, and Tribal consultation resulted in a determination of Adverse Effect to the Area of Potential Effect for Direct Effects and for Visual Effects to the Tumamoc Hill Archaeological District. The undertaking licensed by the Federal Communications Commission (FCC) required an Environmental Assessment to fulfill requirements under the National Environmental Policy Act (NEPA) and a Memorandum of Agreement was executed to fulfill Section 106 of the National Historic Preservation Act (NHPA). Mitigation strategies included archaeological data recovery and cultural sensitivity education program in accordance with the Arizona State Historic Preservation Office and the Advisory Council on Historic Preservation. The University of Arizona Tumamoc Hill Cultural Resources Policy and Management Plan (2008) specifies tribal interests in restoring Tumamoc Hill to its former natural condition.</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/24/2014	Mail	Courtney Rose, PhD.	Pima County Sustainability and Conservation	Cultural / Historic resources	<p>In summary, Tumamoc Hill official designations include:</p> <ul style="list-style-type: none"> <li>-The Desert Laboratory (comprising 870 acres on Tumamoc Hill) was designated a National Historic Landmark in 1965, and in 1966 was listed in the National Register of Historic Places (National Register No. 66000190). Active biological studies are ongoing on a portion of the hill, which was designated as a National Environmental Study area in 1976 by the U.S. Department of the Interior and designated as an Arizona State Scientific and Educational Natural Area in 1981 by the Arizona State Parks Board.</li> <li>-The same 870 acres comprises the Tumamoc Hill Archaeological District, which was listed in the National Register of Historic Places in 2010.</li> <li>-The Tohono O'odham Nation, the Hopi Tribe, the Pascua Yaqui Tribe, the Gila River Indian Community, the Ak-Chin Indian Community, and the Salt River Pima-Maricopa Indian Community consider Tumamoc Hill an ancestral site of cultural significance.</li> <li>-Should FirstNet propose to include Tumamoc Hill in its network planning, it is critical that the cultural, natural, and scientific significance of this site be considered and impacts to the site be avoided.</li> </ul> <p>Sincerely, Courtney Rose, Ph.D., Program Coordinator Pima County Office of Sustainability &amp; Conservation Cultural Resources and Historic Preservation Division</p>	FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.
12/24/2014	Email	Courtney Rose, PhD.	Pima County Public Works Center, Office of Sustainability and Conservation	NOI	<p>Good afternoon:</p> <p>Please see attached document with comments regarding Tumamoc Hill, located in Tucson, Arizona. The letter is a response to a request for comments by the First Responder Network Authority NOI to Prepare Programmatic Environmental Impact Statements and Conduct Scoping for the Nationwide Public Safety Broadband Network [Federal Register/Vol 79/No. 218].</p> <p>Thank you for your consideration.</p> <p>Courtney Rose</p>	Thank you for your comment.
12/26/2014	Email	Steve Long	Long Realty Company	Cultural / Historic resources	<p>Thank you Russell! Let me know how I can help. Steve</p> <p>On Tue, Dec 16, 2014 at 6:36 AM, Long, Russell &lt;longs@longrealty.com&gt; wrote: To Whom It May Concern,</p> <p>Tumamoc Hill has been a fixture in our family since the very early 1900's when our great grandfather, Burton Bovee, began working there. Long before we every visited there and as children our mother told us tales of Burton working there, riding his horse and mule all over the Tucson basin collecting samples and specimens. As adults we became aware of the cultural and historical significance of the site as a result of the approximately 3,000 year old Hohokam Indian village atop the hill as well the historic volcanic stone buildings and their current uses. Certainly Tumamoc Hill is a local and national treasure worthy of preservation. Please feel free to contact me if you would like to discuss this or have questions. Thank you.</p> <p>Russell P. Long, CRB, CLHS</p>	Thank you for your comment.
12/27/2014	Email	Quincy M. Kennedy	Public	Cultural / Historic resources	<p>Thank you for offering to read our comments on the proposed communications towers on Tumamoc Hill. I study archaeology and am intimately aware of the hill's value as a cultural resource. Communication for first responders is very important, but please be careful with the cultural resources up there.</p>	Thank you for your comment.
12/28/2014	Email	Doug Little	Public	Cultural / Historic resources	<p>Please protect the ancient trincheras on Tumamoc Hill by restricting construction to the existing antenna pads, so our first responders can communicate while still allowing Pima County and the University of Arizona to protect this important place of the past.</p>	Thank you for your comment.
12/28/2014	Email	Larry Venable	University of Arizona	Cultural / Historic resources	<p>I am writing to explain to you the high cultural, historic and ecological value of Tumamoc, a research station of the University of Arizona in Tucson. This property is sacred to 5 southwestern native American tribes, with human constructions dating back at least 2,000 years.</p>	Thank you for your comment.
12/28/2014	Email	Larry Venable	University of Arizona	Biological Resources	<p>Since 1903 it has been an ecological research station, first of the Carnegie Institute of Washington, now of the University of Arizona. Important work in the history of ecology was and is conducted here. Some ongoing long-term ecological projects have been running for over 100 years and the data has been recently archived at Ecological Archives, Ecological Society of America. There are over 20 ongoing ecological projects, some funded by the National Science Foundation.</p> <p>I invite you to please join us in preserving and enhancing this wonderful long-standing resource.</p> <p>Larry Venable</p>	Thank you for your comment.

**FirstNet PEIS Scoping Comments**

Date Rec'd	Format	Name	Organization	Topic	Comment	Response
12/28/2014	Email	Marilyn Guida	Public	Cultural / Historic resources	<p>Dear Ms Amanda Pereira,</p> <p>I write to urge that the FirstNet need for access to Tumamoc Hill in Tucson, Arizona will contribute to preservation of the cultural, archaeological and biological resources of the area by making use of the existing pads for the antennas, transmitters, and other equipment needed by FirstNet.</p> <p>This is an area of cultural significance to the Tohono O'odham Tribe from the 15th Century to modern times. It also contains evidence of occupation from the Early Agricultural Period of the indigenous people as far back as 2,000 years ago as well as the Hohokam people circa A.D. 800 (1100 years ago). This length of human occupation is highly significant and an important reason why modern construction in this area should not be expanded. The University of Arizona currently manages many currently active research projects into the cultural and biological resources of this area. This is an additional reason why expansion of present areas impacted construction should not be allowed.</p> <p>Perhaps most important of all is the impact to the Tohono O'odham people who have used this area for at least five centuries and continue to use it today. As the first Americans, we should respect their longstanding rights to use of Tumamoc Hill as our first priority.</p> <p>Thank you for considering this plea, Marilyn Guida</p>	<p>FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.</p>
12/28/2014	Email	Michael Rosenzweig	University of Arizona	Cultural / Historic resources	<p>Dear Ms Pereira,</p> <p>I have more to add to the FirstNet scoping process.</p> <p>As I promised, I have tracked down and am sending a number of documents relating to Tumamoc Hill. Eight pdf files are attached. (There could have been more if there had been more time.)</p> <p>The files include:</p> <ul style="list-style-type: none"> <li>** three from county documents of November 2007. One of these contains comments of US Rep Raúl M. Grijalva, as well as the strong point made by Dr. Ned Norris Jr. (Chairman of the Tohono O'odham Nation), i.e., that Tumamoc has spiritual significance to the Nation and other tribes. (By the way, Pima County, in early 2009, did buy the land mentioned in the discussions. I have a video of the auction.)</li> <li>** three from The University of Arizona management plan for Tumamoc. These cover the 2007 plan of the City of Tucson, acknowledgment of the importance of the Hill to native tribes, and restrictions on lessees to prevent further degradation of the Hill.</li> <li>** an excerpt from an Island Press book about restoration ecology, acknowledging that Tumamoc Hill originated this crucial part of environmental conservation.</li> <li>** an excerpt from a recent newsletter of the University's Dept of Ecology &amp; Evolutionary Biology.</li> </ul> <p>Thank you again for the care you have taken to learn about our area in preparation for FirstNet planning.</p> <p>Sincerely, Michael Rosenzweig Director, Tumamoc: People &amp; Habitats University of Arizona Tucson</p>	<p>Thank you for your comment.</p>

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Date Rec'd	Format	Name	Organization	Topic	Comment	Response
12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	NOI	<p>Dear Ms. Pereira :</p> <p>The U.S. Environmental Protection Agency has reviewed the November 12, 2014 Notice of Intent to prepare Programmatic Environmental Impact Statements and Conduct Scoping for the Nationwide Public Safety Broadband Network. Our comments are provided pursuant to the National Environmental Policy Act, Council on Environmental Quality regulations (40 CFR Parts 1500-1508) and § 309 of the Clean Air Act.</p> <p>To assist in the scoping process for this project , we have identified several issues for your attention in the preparation of the Western regional EIS. We are most concerned about the following issues: impacts to water and air, impacts to biological resources, invasive species management , and habitat protection.</p> <p>We appreciate the opportunity to review this NOI and are available to discuss our comments. Please send one hard copy of the Draft PEIS and one CD ROM copy to this office at the same time it is officially filed with our Washington D.C. Office. If you have any questions, please contact me at (415) 972-3545, or contact Scott Sysum, the lead reviewer for this project. Scott can be reached at (415) 972-3742 or sysum.scott @epa.gov.</p>	Thank you for your comment.
12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Purpose and Need	<p>US EPA DETAILED COMMENTS ON THE NOTICE OF INTENT TO PREPARE PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENTS AND CONDUCT SCOPING FOR THE NATIONWIDE PUBLIC SAFETY BROADBAND NETWORK, DECEMBER 29, 2014</p> <p>Statement of Purpose and Need</p> <p>The Draft Programmatic Environmental Impact Statement should clearly identify the underlying purpose and need to which the First Responder Network Authority is responding in proposing the alternatives (40 CFR 1502.13). The purpose of the proposed action is typically the specific objectives of the activity, while the need for the proposed action may be to eliminate a broader underlying problem or take advantage of an opportunity.</p> <p>Recommendation:</p> <p>The purpose and need should be a clear, objective statement of the rationale for the proposed project.</p>	The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.
12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Alternatives	<p>Alternatives Analysis</p> <p>The National Environmental Policy Act requires evaluation of reasonable alternatives, including those that may not be within the jurisdiction of the lead agency (40 CFR Section 1502.14(c)). A robust range of alternatives will include options for avoiding significant environmental impacts. The DPEIS should provide a clear discussion of the reasons for the elimination of alternatives which are not evaluated in detail. Alternative network routes, including buried or aerial options, as well as environmentally preferable routes, should be evaluated. The DPEIS should also evaluate alternative configurations for access roads.</p> <p>The alternatives analysis should describe the approach used to identify the alternative routes and the criteria used to select the different routes.</p> <p>The environmental impacts of the proposed action and alternatives should be presented in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public (40 CFR 1502.14). The potential environmental impacts of each alternative should be quantified to the greatest extent possible (e.g., acres of forest impacted, tons per year of emissions produced).</p> <p>Recommendations:</p> <p>The DPEIS should describe how each alternative was developed, how it addresses each project objective, and how it will be implemented. The DPEIS should describe the methodology and criteria used for determining the network route and alternative routes. The alternatives analysis should include a discussion of environmentally preferable options for the network, including the use of underground cables versus overhead wires; alternative configurations for access roads; and alternative methods of construction, such as using heavy lift helicopters to transport and set cell towers.</p> <p>The DPEIS should clearly describe the rationale used to determine whether impacts of an alternative are significant or not. Thresholds of significance should be determined by considering the context and intensity of an action and its effects (40 CFR 1508.27).</p>	The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.

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12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Water Resources	<p>Water Resources</p> <p>Geographic Extent of Waters of the United States</p> <p>The project applicant should coordinate with the U.S. Army Corps of Engineers to determine if the proposed project requires a Section 404 permit under the Clean Water Act. Section 404 regulates the discharge of dredged or fill material into waters of the United States (WUS), including wetlands and other special aquatic sites. The DPEIS should describe all WUS that could be affected by the project alternatives, and include maps that clearly identify all waters within the project area. A jurisdictional delineation will confirm the presence or absence of WUS in the project area and help determine whether or not the proposed project would require a Section 404 permit.</p> <p>Recommendation:</p> <p>The DPEIS should discuss the potential that WUS could be affected and that consultation with the USACE may be required to determine if there are jurisdictional WUS present at individual project sites.</p> <p>Drainages, Ephemeral Washes, and Floodplains</p> <p>Natural washes perform a diversity of hydrologic, biochemical, and geochemical functions that directly affect the integrity and functional condition of higher-order waters downstream. Healthy ephemeral waters with characteristic plant communities control rates of sediment deposition and dissipate the energy associated with flood flows. Ephemeral washes also provide habitat for breeding, shelter, foraging, and movement of wildlife. Many plant populations are dependent on these aquatic ecosystems and adapted to their unique conditions. The potential damage that could result from disturbance of flat-bottomed washes includes alterations to the hydrological functions that natural channels provide in arid ecosystems, such as adequate capacity for flood control, energy dissipation, and sediment movement; as well as impacts to valuable habitat for desert species.</p> <p>Recommendations:</p> <p>The DPEIS should discuss the potential that individual projects may impact aquatic features that are determined not to constitute WUS, and discuss potential mitigation.</p> <p>The DPEIS should address the potential effects of project discharges, if any, on surface water quality.</p>	<p>The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.</p>
12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Biological Resources	<p>Biological Resources, Habitat and Wildlife</p> <p>The DPEIS should identify all petitioned and listed threatened and endangered species and critical habitat that might occur within individual project areas. The document should identify and quantify which species or critical habitat might be directly, indirectly, or cumulatively affected by each alternative and mitigate impacts to these species. Emphasis should be placed on the protection and recovery of species due to their status or potential status under the federal or state Endangered Species Act. Network line rights of way are anthropogenic disturbances which alter the spatial structure of habitat elements, creating linear patches or line corridors which in turn impact ecological integrity by modifying ecological processes (abiotic &amp; biotic) at various scales. Network line ROWs can result in habitat fragmentation and increased habitat edge effects, affecting individual species with different intensity.</p> <p>Recommendations:</p> <p>The DPEIS should discuss how the proposed action would comply with ESA requirements, including any necessary ESA Section 7 consultation efforts with the U.S. Fish and Wildlife Service.</p> <p>EPA recommends that FirstNet coordinate with USFWS field offices and with applicable state biological resource management agencies to ensure that current and consistent surveying, monitoring, and reporting protocols will be applied in protection and mitigation efforts.</p> <p>The DPEIS should describe the potential for habitat fragmentation and obstructions for wildlife movement from the construction of individual projects and other projects in the area.</p> <p>Discuss the need for monitoring, mitigation, and if applicable, translocation management plans for the sensitive biological resources. This could include, but is not limited to, a Bird and Bat Conservation Strategy, a Raven Monitoring, Management, and Control Plan, and Special - Status Plant Impact Avoidance and Mitigation Plan.</p> <p>The DPEIS should include assurances that the design of the aerial lines would be in compliance with current standards and practices that reduce the potential for raptor fatalities and injuries.</p>	<p>The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.</p>

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12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Biological Resources	<p>The EPA is also concerned about the potential impacts of construction, installation, and maintenance activities (grading, filling) on habitat. We encourage the use of alternatives that avoid and protect high value habitat and create or preserve linkages between habitat areas. We are also concerned with management of the ROW, specifically vegetation control, in order to prevent natural forest succession. ROW management is usually practiced to protect the system from windfall, contact with trees and branches, and other potential hazards. Additionally access roads are maintained in order to ensure access for maintenance and upkeep of the system components.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>The DPEIS should describe potential impacts from construction, installation, and maintenance activities on habitat and threatened and endangered species.</li> </ul> <p>The DPEIS should describe the ROW vegetation management techniques to be used and potential associated environmental impacts, especially if mechanical methods or herbicides are to be used.</p> <p>The DPEIS should indicate the location of important wildlife habitat areas. The DPEIS should describe what measures will be taken to protect important wildlife habitat areas and to preserve linkages between them.</p> <p>Invasive Species</p> <p>Human actions are the primary means of invasive species introductions. The construction of network lines may cause disturbance of ROW soils and vegetation through the movement of people and vehicles along the ROW, access roads, and laydown areas. These activities can contribute to the spread of invasive species. Parts of plants, seeds, and root stocks can contaminate construction equipment and essentially "seed" invasive species wherever the vehicle travels. Invasive species infestations can also occur during periodic buried/erial line ROW maintenance activities especially if these activities include mowing and clearing of vegetation. Once introduced, invasive species will likely spread and impact adjacent properties with the appropriate habitat.</p> <p>Executive Order 13112, Invasive Species (February 3, 1999), mandates that federal agencies take actions to prevent the introduction of invasive species, provide for their control, and minimize the economic, ecological, and human health impacts that invasive species cause. Executive Order 13112 also calls for the restoration of native plants and free species. If the proposed project will entail new landscaping, the DPEIS should describe how the project will meet the requirements of Executive Order 13112.</p> <p>In addition, we encourage alternative management practices that limit herbicide use, focusing instead on other methods to limit invasive species vegetation and decrease fire risk.</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>The DPEIS should describe the invasive plant management plan used to monitor and control noxious weeds. If herbicides or pesticides will be used to manage vegetation, the DPEIS should disclose the projected quantities and types of chemicals. The invasive plant management plan should identify methods that can be used to limit the introduction and spread of invasive species during and post-construction. These measures can include marking and avoidance of invasive species, timing construction activities during periods that would minimize their spread, proper cleaning of equipment, and proper disposal of woody material removed from the ROW.</li> </ul> <p>Because construction measures may not be completely effective in controlling the introduction and spread of invasives, the DPEIS should describe post-construction activities that will be required such as surveying for invasive species following restoration of the construction site and measures that will be taken if infestations are found.</p>	<p>The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.</p>
12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Air Quality	<p>Air Quality</p> <p>The DPEIS should provide a discussion of ambient air conditions (baseline or existing conditions), National Ambient Air Quality Standards, criteria pollutant nonattainment areas, and potential air quality impacts.</p> <p>The DPEIS should describe and estimate air emissions from potential construction and maintenance activities, as well as proposed mitigation measures to minimize those emissions. The EPA recommends an evaluation of the following measures to reduce emissions of criteria air pollutants and hazardous air pollutants (air toxics).</p> <p>Recommendations:</p> <ul style="list-style-type: none"> <li>• Existing Conditions - The DPEIS should provide a detailed discussion of ambient air conditions, NAAQS, and criteria pollutant nonattainment areas in the vicinity of the project.</li> <li>• Quantify Emissions - The DPEIS should estimate emissions of criteria pollutants and green house gasses from the proposed individual projects and discuss the timeframe for release of these emissions over the lifespan of the projects. The DPEIS should describe and estimate emissions from potential construction activities, as well as proposed mitigation measures to minimize these emissions.</li> <li>• Specify Emission Sources - The DPEIS should specify the emission sources by pollutant from mobile sources, stationary sources, and ground disturbance. This source specific information should be used to identify appropriate mitigation measures and areas in need of the greatest attention.</li> <li>• Construction Emissions Mitigation Plan -The DPEIS should include a draft Construction Emissions Mitigation Plan and ultimately adopt this plan in the Record of Decision. In addition to all applicable local, state, or federal requirements, we recommend the following control measures (Fugitive Dust, Mobile and Stationary Source and Administrative) be included in the Construction Emissions Mitigation Plan in order to reduce impacts associated with emissions of particulate matter and other toxics from construction-related activities:</li> </ul>	<p>The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.</p>

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					<p>o Fugitive Dust Source Controls: The DPEIS should identify the need for a Fugitive Dust Control Plan to reduce Particulate Matter 10 and Fine Particulate Matter 2.5 emissions during construction and operations. We recommend that the plan include these general commitments:</p> <ul style="list-style-type: none"> <li>• Stabilize heavily used unpaved construction roads with a non-toxic soil stabilizer or soil weighting agent that will not result in loss of vegetation, or increase other environmental impacts.</li> <li>• During grading, use water, as necessary, on disturbed areas in construction sites to control visible plumes.</li> <li>• Vehicle Speed</li> <li>• Limit speeds to 25 miles per hour on stabilized unpaved roads as long as such speeds do not create visible dust emissions.</li> <li>• Limit speeds to 10 miles per hour or less on unpaved areas within construction sites on un-stabilized (and unpaved) roads.</li> <li>• Post visible speed limit signs at construction site entrances.</li> <li>• Inspect and wash construction equipment vehicle tires, as necessary, so they are free of dirt before entering paved roadways, if applicable.</li> <li>• Provide gravel ramps of at least 20 feet in length at tire washing/cleaning stations, and ensure construction vehicles exit construction sites through treated entrance roadways, unless an alternative route has been approved by appropriate lead agencies, if applicable.</li> <li>• Use sandbags or equivalent effective measures to prevent run-off to roadways in construction areas adjacent to paved roadways. Ensure consistency with the project's Storm Water Pollution Prevention Plan, if such a plan is required for the project</li> <li>• Sweep the first 500 feet of paved roads exiting construction sites, other unpaved roads en route from the construction site, or construction staging areas whenever dirt or runoff from construction activity is visible on paved roads, or at least twice daily (less during periods of precipitation).</li> <li>• Stabilize disturbed soils (after active construction activities are completed) with a non-toxic soil stabilizer, soil weighting agent, or other approved soil stabilizing method</li> <li>• Cover or treat soil storage piles with appropriate dust suppressant compounds and disturbed areas that remain inactive for longer than 10 days. Provide vehicles (used to transport solid bulk material on public roadways and that have potential to cause visible emissions) with covers. Alternatively, sufficiently wet and load materials onto the trucks in a manner to provide at least one foot of freeboard.</li> <li>• Use wind erosion control techniques (such as windbreaks, water, chemical dust suppressants, and/or vegetation) where soils are disturbed in construction, access and maintenance routes, and materials stock pile areas. Keep related windbreaks in place until the soil is stabilized or permanently covered with vegetation.</li> </ul>	<p>The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.</p>

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					<ul style="list-style-type: none"> <li>o Mobile and Stationary Source Controls:           <ul style="list-style-type: none"> <li>• If practicable, lease new, clean equipment meeting the most stringent of applicable Federal 1 or State Standards. In general, commit to the best available emissions control technology. Tier 4 engines should be used for project construction equipment to the maximum extent feasible.<sup>3</sup></li> <li>• Where Tier 4 engines are not available, use construction diesel engines with a rating of 50 hp or higher that meet, at a minimum, the Tier 3 California Emission Standards for Off-Road Compression-Ignition Engines,<sup>4</sup> unless such engines are not available.</li> <li>• Where Tier 3 engine is not available for off-road equipment larger than 100 hp, use a Tier 2 engine, or an engine equipped with retrofit controls to reduce exhaust emissions of nitrogen oxides and diesel particulate matter to no more than Tier 2 levels.</li> <li>• Consider using electric vehicles, natural gas, biodiesel, or other alternative fuels during construction and operation phases to reduce the project's criteria and greenhouse gas emissions.</li> <li>• Plan construction scheduling to minimize vehicle trips.</li> <li>• Limit idling of heavy equipment to less than 5 minutes and verify through unscheduled inspections.</li> <li>• Maintain and tune engines per manufacturer's specifications to perform at EPA certification levels, prevent tampering, and conduct unscheduled inspections to ensure these measures are followed.</li> </ul> </li> <li>o Administrative controls:           <ul style="list-style-type: none"> <li>• Develop a construction traffic and parking management plan that maintains traffic flow and plan construction to minimize vehicle trips.</li> <li>• Identify any sensitive receptors in the project area, such as children, elderly, and the infirm, and specify the means by which impacts to these populations will be minimized (e.g. locate construction equipment and staging zones away from sensitive receptors and building air intakes).</li> <li>• Include provisions for monitoring fugitive dust in the fugitive dust control plan and initiate increased mitigation measures to abate any visible dust plumes.</li> </ul> </li> </ul>	The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.
12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Infrastructure	<p>Hardening of Infrastructure</p> <p>We understand that FirstNet will likely utilize existing commercial infrastructure to the maximum extent possible in its deployment of the Public Safety Broadband Network. Most likely, existing cellular towers, transport backhaul and data centers will need to be hardened to meet the stringent requirements of the PSBN. Hardening typically includes back up power supply, incorporating backhaul that is not easily disrupted (microwave or satellite), and stockpiling portable sites (Cell on Light Trucks or Cell on Wheels). Some of the larger cell phone companies have been hardening their infrastructure in disaster prone areas.</p> <p>Recommendation:</p> <p>The DPEIS should discuss the need for hardening sites, the use of portable equipment and the need for redundant or alternative backhaul equipment. FirstNet should commit to using as much commercially available equipment as possible and consider using as much renewable energy sources for backup power as is economically feasible.</p>	The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.
12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Climate Change	<p>Climate Change</p> <p>Scientific evidence supports the concern that continued increases in greenhouse gas emissions resulting from human activities will contribute to climate change. Global warming is caused by emissions of carbon dioxide and other heat-trapping gases. On December 7, 2009, the EPA determined that emissions of GHGs contribute to air pollution that "endangers public health and welfare" within the meaning of the Clean Air Act. One report indicates that observed changes in temperature, sea level, precipitation regime, fire frequency, and agricultural and ecological systems reveal that parts of the western United States is already experiencing the measurable effects of climate change.<sup>5</sup> The report indicates that climate change could result in the following changes: poor air quality; more severe heat; increased wildfires; shifting vegetation; declining forest productivity; decreased spring snowpack; water shortages; a potential reduction in hydropower; a loss in winter recreation; agricultural damages from heat, pests, pathogens, and weeds; and rising sea levels resulting in shrinking beaches and increased coastal floods.</p> <p>Recommendation:</p> <p>The DPEIS should consider how climate change could potentially influence the proposed project, specifically within sensitive areas, and assess how the projected impacts could be exacerbated by climate change.</p>	The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.
12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Waste	<p>Hazardous Materials/Hazardous Waste/Solid Waste</p> <p>The DPEIS should address potential direct, indirect and cumulative impacts of hazardous waste from construction and operation of the proposed individual projects and facilities. The document should identify projected hazardous waste types and volumes, and expected storage, disposal, and management plans. It should address the applicability of state and federal hazardous waste requirements. Appropriate mitigation should be evaluated, including measures to minimize the generation of hazardous waste (i.e., hazardous waste minimization). Alternate industrial processes using less toxic materials should be evaluated as mitigation since such processes could reduce the volume or toxicity of hazardous materials requiring management and disposal as hazardous waste.</p>	The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.

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12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Cumulative and Indirect Impacts	<p>Cumulative and Indirect Impacts</p> <p>The cumulative impacts analysis should identify how resources, ecosystems, and communities in the vicinity of the project have already been, or will be, affected by past, present, or future activities in the project area. These resources should be characterized in terms of their response to change and capacity to withstand stresses. Trends data should be used to establish a baseline for the affected resources, to evaluate the significance of historical degradation, and to predict the environmental effects of the project components.</p> <p>For the cumulative impacts assessment, we recommend focusing on resources of concern or resources that are "at risk" and/or are significantly impacted by the proposed project, before mitigation. The EPA supports a regional assessment of the potential cumulative effects of other projects in the area to a range of resources, including aquatic, biological, and cultural resources. These findings should help inform current and future development proposed in the region.</p> <p>The EPA assisted in the preparation of a guidance document for assessing cumulative impacts in California that we find to be very useful. While this guidance was prepared for transportation projects in California, the principles and the 8-step process outlined therein can be applied to other types of projects and offers a systematic way to analyze cumulative impacts for a project. The guidance is available at: <a href="http://www.dot.ca.gov/serv/cumulative_guidance/purpose.htm">http://www.dot.ca.gov/serv/cumulative_guidance/purpose.htm</a>. In accordance with this guidance, the EPA recommends that the DPEIS identify which resources are analyzed, which ones are not, and why. For each resource analyzed, the DPEIS should:</p> <ul style="list-style-type: none"> <li>• Identify the current condition of the resource as a measure of past impacts. For example, the percentage of species habitat lost to date.</li> <li>• Identify the trend in the condition of the resource as a measure of present impacts. For example, the health of the resource is improving, declining, or in stasis.</li> <li>• Identify all on-going, planned, and reasonably foreseeable projects in the study area that may contribute to cumulative impacts.</li> <li>• Identify the future condition of the resource based on an analysis of impacts from reasonably foreseeable projects or actions added to existing conditions and current trends.</li> <li>• Assess the cumulative impacts contribution of the proposed alternatives to the long-term health of the resource, and provide a specific measure for the projected impact from the proposed alternatives.</li> <li>• When cumulative impacts are identified for a resource, mitigation should be proposed.</li> <li>• Disclose the parties that would be responsible for avoiding, minimizing, and mitigating those adverse impacts.</li> <li>• Identify opportunities to avoid and minimize impacts, including working with other entities.</li> </ul> <p>Recommendations: The DPEIS should consider the cumulative impacts associated with other development projects proposed in the individual project areas and the potential impacts on various</p>	<p>The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.</p>
12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Cultural / Historic resources	<p>Coordination with Tribal Governments</p> <p>Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (November 6, 2000), was issued in order to establish regular and meaningful consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and to strengthen the United States government-to-government relationships with Indian tribes.</p> <p>Recommendation: The DPEIS should describe the process and outcome of government-to-government consultation between FirstNet and each of the tribal governments within the individual project areas, issues that were raised (if any), and how those issues were addressed in the selection of the proposed alternative.</p> <p>National Historic Preservation Act and Executive Order 13007 Consultation for tribal cultural resources is required under Section 106 of the National Historic Preservation Act. Historic properties under the NHPA are properties that are included in the National Register of Historic Places or that meet the criteria for the National Register. Section 106 of the NHPA requires a federal agency, upon determining that activities under its control could affect historic properties, consult with the appropriate State Historic Preservation Officer/Tribal Historic Preservation Officer. Under NEPA, any impacts to tribal, cultural, or other treaty resources must be discussed and mitigated. Section 106 of the NHPA requires that Federal agencies consider the effects of their actions on cultural resources, following regulation in 36 CFR 800.</p> <p>Executive Order 13007, Indian Sacred Sites (May 24, 1996), requires federal land managing agencies to accommodate access to, and ceremonial use of, Indian sacred sites by Indian Religious practitioners, and to avoid adversely affecting the physical integrity, accessibility, or use of sacred sites. It is important to note that a sacred site may not meet the National Register criteria for a historic property and that, conversely, a historic property may not meet the criteria for a sacred site.</p> <p>Recommendation: The DPEIS should address the existence of Indian sacred sites in the individual project areas. It should address Executive Order 13007, distinguish it from Section 106 of the NHPA, and discuss how FirstNet will avoid adversely affecting the physical integrity, accessibility, or use of sacred sites, if they exist. The DPEIS should provide a summary of all coordination with Tribes and with the SHPO/THPO (if any), including identification of NRHP eligible sites, and development of a Cultural Resource Management Plan.</p>	<p>The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.</p> <p>The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.</p>
12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Environmental Justice	<p>Environmental Justice and Impacted Communities</p> <p>Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994) and the Interagency Memorandum of Understanding on Environmental Justice (August 4, 2011) direct federal agencies to identify and address disproportionately high and adverse human health or environmental effects on minority and low-income populations, allowing those populations a meaningful opportunity to participate in the decision-making process. Guidance6 by CEO clarifies the terms low-income and minority population (which includes Native Americans) and describes the factors to consider when evaluating disproportionately high and adverse human health effects.</p> <p>Recommendations: The DPEIS should discuss the potential need to evaluate environmental justice populations within the geographic scope of the individual projects. If such populations exist, the DPEIS should discuss the potential for disproportionate adverse impacts to minority and low-income populations, and the approaches used to foster public participation by these populations. Assessment of the projects impact on minority and low-income populations should reflect coordination with those affected populations.</p> <p>The DPEIS should discuss the potential need to provide outreach to all communities that could be affected by the individual projects.</p>	<p>The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.</p>

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12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Land Use	<p>Coordination with Land Use Planning Activities</p> <p>The DPEIS should discuss how the proposed action would support or conflict with the objectives of federal, state, tribal or local land use plans, policies and controls in the individual project areas. The term "land use plans" includes all types of formally adopted documents for land use planning, conservation, zoning and related regulatory requirements. Proposed plans not yet developed should also be addressed if they have been formally proposed by the appropriate government body in a written form (CEO's Forty Questions, #23b).</p>	<p>The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.</p>
12/29/2014	Email Attachment	Ann McPherson	U.S. Environmental Protection Agency Region IX	Public Health and Safety	<p>Public Health and Safety - Valley Fever</p> <p>Coccidioidomycosis, (kok-sid-oy-doh-my-KOH-sis), or Valley Fever, is a fungal infection that is almost always acquired from the environment via the inhalation of fungal spores. It can affect humans, many species of mammals and some reptiles.<sup>7</sup> The fungus, Coccidioides, is endemic in the soil of the southwestern United States, Mexico, and parts of Central and South America. Coccidioides can live for long periods of time in soil under harsh environmental conditions including heat, cold, and drought.<sup>8</sup> Coccidioides can be released into the air when soil containing the fungus is disturbed, either by strong winds or activities such as farming or construction. Distribution of the fungus is typically patchy, but in some "hot spots," up to 70% of the human population has been infected.<sup>9</sup> The number of reported Valley Fever cases in the U.S. has risen from less than 5,000 in 2001 to more than 20,000 cases in 2011.<sup>9</sup> An estimated 150,000 more cases go undiagnosed every year. The majority of reported cases are located in Arizona and California.<sup>10</sup> The reason for the recent increase in cases, however, is unclear. Dust storms in endemic areas are often followed by outbreaks of coccidioidomycosis. If the dust storms are severe, the fungal spores can be carried outside the endemic area into neighboring counties, where outbreaks follow.<sup>11</sup> According to the Centers for Disease Control and Prevention, workers engaged in soil-disturbing activities in endemic areas should be considered at risk for the disease.<sup>12</sup> Occupational groups at risk include farmers, agricultural workers, construction workers and archaeologists. Some groups of people appear to be at increased risk for disseminated disease and can become seriously ill when infected. People at risk for severe disease include those with weakened immune systems, persons with cancer or who are on chemotherapy, or persons who are HIV-infected. Also at higher risk for serious illness are the elderly, persons of African or Filipino descent, and women in the third trimester of pregnancy.<sup>13</sup></p> <p>Recommendations:</p> <p>The EPA recommends that the DPEIS discuss potential exposures to the fungus, Coccidioides, and susceptibilities of workers and nearby residents to Valley Fever due to soil-disturbing activities of the project.</p> <p>The Environmental Awareness Program for the workers should include training on the health hazards of Valley Fever, how it is contracted, what symptoms to look for, proper work procedures, how to use personal protective equipment, the need to wash prior to eating, smoking or drinking and at the end of the shift, and the need to inform the supervisor of suspected symptoms of work-related Valley Fever. The training should identify those groups of individuals most at risk and urge individuals to seek prompt medical treatment if Valley Fever symptoms (flu-like illness with cough, fever, chest pain, headache, muscle aches, and tiredness) develop.</p>	<p>The Programmatic Environmental Impact Statements will comply with all requirements under NEPA and other relevant laws, regulations, and Executive Orders.</p>
12/29/2014	Mail	Diana Rhoades	Public	Cultural / Historic resources	<p>Dear Ms. Pereira,</p> <p>Tumamoc Hill is a sacred place. It is on the National Register of Historic Places. It is a landmark, it is a University research station, studying plants and the changes in climate since 1903. It is a national archeological district, a burial ground for Native American People. It was an early trading post for the First People. It is rich in natural and cultural history.</p> <p>It should not be a place where the government places large towers or builds huge power lines. I hope you will carefully consider all the implications of FirstNet.</p> <p>All my best Diana Rhoades</p>	<p>Thank you for your comment.</p>

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12/29/2014	Email	Doug Gann, Ph.D.	Archaeology Southwest	Cultural / Historic resources	<p>Dear FirstNet</p> <p>I am writing in support of what I understand will be a new installation for our first responders on top of Tumamoc Hill in Tucson Arizona.</p> <p>I would like to offer the suggestion that FirstNet keep any new construction to areas of this hilltop that have already been disturbed by previous construction activities.</p> <p>We have known Tumamoc was an important archaeological site for 100 years, but it has only been in the past 10 years that the evidence has been understood in proper contexts. The ancient homes built on Tumamoc were constructed at the beginning of what we now know of as the ancient southwest culture area. The Cliff Dwellings in Mesa Verde, the stunning buildings of Chaco Canyon, the 5 story adobe Casa Grande, all of these places were built by a people who apparently got their start 4000 years ago, along the Santa Cruz River, where modern Tucson sits today.</p> <p>Though partially disturbed, the village on top of Tumamoc still contains evidence about how this pan-Southwestern culture began. What has not been destroyed should be preserved when ever possible.</p> <p>I think everyone in the archaeological community believes that your project needs to be supported, our community's safety has to come first. However, if new construction can be steered away from archaeologically critical areas, we also believe that we can achieve a win-win scenario here.</p> <p>Best Wishes, Doug Gann, Ph.D. Preservation Archaeologist</p>	<p>FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.</p>
12/29/2014	Email	Scott Sysum	U.S. Environmental Protection Agency Region IX	NOI	<p>Dear Ms. Pereira</p> <p>I have been assigned as the lead reviewer for the U.S. EPA Region 9 for the FirstNet National Public Safety Broadband Network PEIS Project. I have attached a pdf file of our scoping comment letter regarding this project. The signed letter was mailed today to Ms. Amanda Pereira.</p> <p>Thank you for providing us the opportunity to review this interesting project. Please feel free to contact us if you have any questions, seek clarifications or if we can help in any other way.</p> <p>v/r Scott Sysum</p>	Thank you for your comment.
12/30/2014	Email Attachment		Public	Alternatives	<p>The FirstNet Dilemma</p> <p>In order for FirstNet to succeed, it must provide broadband wireless service to public safety users for less than market rates. In addition, the FirstNet infrastructure must be more robust and more resilient than commercial wireless networks. The only way for FirstNet to achieve both of these goals is to leverage excess Nationwide Public Safety Broadband Network (NPSBN) capacity to create a revenue stream that subsidizes public safety user recurring monthly fees to the point that no commercial operator can undercut them.</p> <p>If the recurring monthly fees charged to public safety users by FirstNet is not significantly lower than commercial wireless rates, the commercial networks will likely simply lower their rates for public safety subscribers to undercut and undermine FirstNet. Financially strapped localities will likely choose the less expensive commercial network rather than subscribe to FirstNet, despite the fact that FirstNet will offer priority access to a more robust network. If such a scenario plays out, FirstNet will fail.</p> <p>Rather than becoming a customer of commercial wireless network operators, public safety should leverage the excess capacity in the NPSBN so that commercial operators and other secondary users become FirstNet customers, not vice versa. If Public Safety does not control the network, it will never achieve its goal of unrestricted priority access to broadband wireless, supported by a public safety grade (bulletproof) network infrastructure.</p> <p>One way to address the FirstNet Dilemma is for FirstNet to petition the FCC to issue an Order that would require all new 700MHz broadband wireless subscriber devices be capable of accessing FirstNet spectrum (Band 14). This single regulatory action would create an immediate market for FirstNet spectrum, even in the absence of a deployed network. By creating an environment that ensures that band 14 capable devices become ubiquitous, the FCC Order would increase the value of FirstNet spectrum to potential lessees, enabling FirstNet to generate a revenue stream prior to the deployment of the NPSBN simply by leasing the spectrum until the NPSBN is ready to deploy in a given locale. In addition, the FCC Order would ensure the availability of band 14 devices and substantially lower their cost to public safety users when the NPSBN is deployed.</p> <p>Every day that FirstNet spectrum lays fallow is a lost opportunity to generate revenue that could help fund NPSBN construction, deployment and ongoing operating expenses. Once the NPSBN is deployed, FirstNet (or the designated local network operator) could continue to lease excess NPSBN capacity to secondary users through a public private partnership, thus reducing public safety user recurring user recurring monthly fees to a level far below commercial market rates, whilst encouraging public safety network participation and discouraging potential competitors.</p>	Thank you for your comment.
12/31/2014	Email	Patricia A. Gilman, Ph.D., RPA	University of Arizona	Cultural / Historic resources	<p>Ms. Pereira,</p> <p>I am writing in support of the idea that FirstNet use the existing antenna pads on Tumamoc Hill in Tucson. The entire top and sides of the hill are an archaeological site that is very important in the history of Tucson. It has hundreds of rock-ringed houses that are about 2000 years old along with petroglyphs and a very early community building. For an archaeologist like me, it is a very cool site because it has told us about the lives of people living at this time in the Tucson Basin. The site is unique, by the way. There are no others like it, which suggests its importance. Most of the site has not been excavated, and so there is much more we could learn here. But the most important thing is to preserve the site for the future so that others, both the public and archaeologists, can appreciate the lives of these people.</p> <p>Please do the right thing for the history of Tucson and use only the existing antenna pads. That way, everyone gets what they want and need.</p> <p>Thank you for your attention to this.</p> <p>Patricia A. Gilman, Ph.D., RPA</p>	<p>FirstNet does not yet have a network design, however we will work to avoid adverse impacts to sensitive resources wherever possible. Once specific projects are identified, FirstNet will work with the appropriate federal, state, and local agencies, and federally-recognized Indian tribes, to comply with all requirements.</p>
1/1/2015	Email	Paul Mirocha	Public	Aesthetics / Recreational Use	<p>Dear Amanda,</p> <p>Mike Rosenzweig, my boss at Tumamoc: People and Habitats, asked me to comment on my perspective on Tumamoc Hill. I have been artist-in-residence there since 2011. You can see a more of what I've done there on my blog: <a href="http://TumamocSketchbook.com">http://TumamocSketchbook.com</a>.</p>	Thank you for your comment.
1/1/2015	Email	Paul Mirocha	Public	Geology	<p>What is Tumamoc Hill?</p> <p>It's a highly protected natural wild-lands Sonoran Desert mountain, National Historic Landmark, ecological research preserve, U.S. Archaeological District, and community icon—all of two miles from downtown and surrounded by growing urban Tucson.</p> <p>But there is no single description of Tumamoc Hill that is complete. There are many layers to the place, with different meanings depending on who you are talking to. A geologist will tell you that Tumamoc is an inselberg of volcanic rock remaining from eruptions between 20 – 30 million years ago. And it originally was formed near what is now the Santa Catalina Mountains.</p>	Thank you for your comment.
1/1/2015	Email	Paul Mirocha	Public	Cultural / Historic resources	<p>A paleontologist will tell you that the current Sonoran Desert environment came about 8–15 million years ago during a drying trend, when the unique desert plants here evolved from tropical ancestors moving north from Mexico.</p> <p>The Tohono O'odham call it Cemamagi Doag, "Horned Lizard Mountain." The Hill is considered a sacred ancestral site for O'odham, Yaqui, and Hopi Indians.</p>	Thank you for your comment.
1/1/2015	Email	Paul Mirocha	Public	Infrastructure	<p>The summit is now a site for a number of communications and homeland security communications towers, yet this role has probably been played for thousands of years. We know that up until historic times, Sentinel Peak, Tumamoc's sister peak was used, for its broad view of the valley, as a lookout post, especially for marauding Apaches.</p>	Thank you for your comment.

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1/1/2015	Email	Paul Mirocha	Public	Cultural / Historic resources	<p>It has been called many names. Lawrence Clark Powell, famed librarian and writer who lived in Tucson, called Tumamoc "Tucson's Acropolis." It's been called by various names, including "A Mecca for botanists, and "The Jerusalem of desert rats."</p>	Thank you for your comment.
1/1/2015	Email	Paul Mirocha	Public	Biological Resources	<p>The first thing a modern ecologist will say to you is "don't stray off the road." Beginning with the establishment of the Desert Botanical Laboratory in 1903 by the Carnegie Institution of Washington, Tumamoc is the oldest continually monitored ecological research preserve in the world, with data from over 100 years of study. This is the world's first restoration ecology project. The nature here is to look at, to study, to appreciate, but not to exploit—not even to use.</p>	Thank you for your comment.
1/1/2015	Email	Paul Mirocha	Public	Cultural / Historic resources	<p>To an archeologist, Tumamoc is a mystery that would challenge even Sherlock Holmes. Ruins of cultures living on Tumamoc go back 3,500 years, and at various times in prehistory, the Tumamoc hilltop was probably an important landmark, cultural focal point, and ceremonial ground.</p>	Thank you for your comment.
1/1/2015	Email	Paul Mirocha	Public	Aesthetics / Recreational Use	<p>To the thousands of people who walk the road daily (only authorized vehicles are allowed) Tumamoc is the best workout in town, a treadmill with a spectacular view. It's a source of healing and health. It's a place where one can stroll among grazing deer five minutes from downtown. Dig a little deeper and many walkers will confide that Tumamoc is a very personal emotional or spiritual sanctuary.</p>	Thank you for your comment.
1/1/2015	Email	Paul Mirocha	Public	Cultural / Historic resources	<p>Urban culture and ecological research can co-exist on Tumamoc Hill. It is a sanctuary for humans as well as other Sonoran Desert life forms, but the boundaries are clear: no one steps off the road without special permission. Scientists have protected the Hill for the last century. Now it's up to the community to take part in stewardship of the Hill as a special place and a cultural value for the next 100 years.</p> <p>At that time, we'll check in again and see how it's going. In the meantime I urge Firstnet to join the other institutions, groups, and governmental entities that are united as part of the stewardship of this valuable site.</p> <p>best regards, Paul Mirocha</p>	Thank you for your comment.
1/3/2015	Email	Marc Severson	Public	Cultural / Historic resources	<p>Dear Ms. Pereira,</p> <p>I am writing to urge you to protect the cultural resources on the top of Tumamoc Hill in Tucson. This historic/prehistoric site has unique constructions that give insight into the prehistory of the Southwest. Further construction endangers these resources.</p> <p>There are archaeological resources on and around this site that are irreplaceable. Considerable damage has already occurred over the years.</p> <p>I urge you to limit construction on this site to areas that have been previously disturbed and allow no further destruction of these resources.</p> <p>Thank you, Marc Severson</p>	Thank you for your comment.
1/6/2015	Email	Matt Goode	University of Arizona	Biological Resources	<p>Dear Ms. Pereira,</p> <p>I am a Research Scientist at the University of Arizona and my lab is situated on Tumamoc Hill. I am writing to let you know how important Tumamoc Hill is to me and my students, as well as the community of Tucson. I have been conducting research on reptiles on Tumamoc for the past three years. Besides providing us with an incredible opportunity to better understand how reptiles persist in fragmented habitats, Tumamoc also enables us to provide unprecedented opportunities to educate the general public about scientific research and conservation of natural resources. Your help in keeping Tumamoc Hill healthy and productive is greatly appreciated by a lot of diverse stakeholders who care about Tucson's history and its future!</p> <p>Thank you so much for your support! Matt</p>	Thank you for your comment.

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