

## **APPENDIX A**

### **Non-SIP Provisions Cited in Elements A and J**

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## APPENDIX A

### Non-SIP Provisions Cited in Elements A and J

#### Nevada Administrative Code

##### Chapter 445B, Air Controls (August 2012 codification):

**NAC 445B.22057 Allowable emissions of sulfur from specific sources: Units Numbers 1, 2 and 3 of Reid Gardner Power Station.** ([NRS 445B.210](#)) The allowable emission of sulfur from fossil fuel-fired power generating units Numbers 1, 2 and 3 of NV Energy's Reid Gardner Station, located in Air Quality Control Region 13, Basin 218, California Wash, must not be greater than 0.275 pounds per million Btu's (0.495 kilograms per million kg-cal).

[Environmental Comm'n, Air Quality Reg. § 8.2.1.3 + § 16.1.3.5, eff. 1-1-83]—(NAC A 9-19-90; R065-03, 10-30-2003; R096-05, 10-31-2005)

**NAC 445B.2206 Allowable emissions of sulfur from specific sources: Unit Number 4 of Reid Gardner Power Station.** ([NRS 445B.210](#)) The allowable emission of sulfur from fossil fuel-fired power generating unit Number 4 of NV Energy's Reid Gardner Station, located in Air Quality Control Region 13, Basin 218, California Wash, must not be greater than 0.145 pounds per million Btu's (0.261 kilograms per million kg-cal). The efficiency of the capture of sulfur must be maintained at a minimum of 85 percent, based on a 30-day rolling average.

(Added to NAC by Environmental Comm'n, eff. 8-22-86; A by R096-05, 10-31-2005)

**NAC 445B.22063 Allowable emissions of sulfur from specific sources: North Valmy Power Station.** ([NRS 445B.210](#)) The allowable emission of sulfur from fossil fuel-fired power generating unit Number 2 NV Energy's North Valmy Station, located in Air Quality Control Region 147, Basin 64, Clovers Area, must not be greater than 0.3 pounds per million Btu's (0.540 kilograms per million kg-cal). The efficiency of the capture of sulfur must be maintained at a minimum of 70 percent, based on a 30-day rolling average.

(Added to NAC by Environmental Comm'n, eff. 8-22-86; A 9-25-87; R096-05, 10-31-2005)

**NAC 445B.2208 Emission of hydrogen sulfide from certain facilities for generating electricity from geothermal brine.** ([NRS 445B.210](#)) The emission of hydrogen sulfide from the facilities for generating electricity from geothermal brine at the Oxbow Geothermal Corporation's geothermal power plant in Air Quality Control Region 147, Basin 128, Dixie Valley, may not exceed 249 short tons (225.9 metric tons) per year.

(Added to NAC by Environmental Comm'n, eff. 10-18-88)—(Substituted in revision for NAC 445B.387)

**NAC 445B.221 Adoption by reference and applicability of certain provisions of federal law and regulations.** ([NRS 445B.210](#))

1. Title 40 C.F.R. §§ 51.100(s), 51.100(nn) and 51.301 and Appendix S of 40 C.F.R. Part 51 are hereby adopted by reference as they existed on July 1, 2010.

2. Title 40 C.F.R. § 51.165 is hereby adopted by reference as it existed on July 1, 2002.

3. Appendices M and W of 40 C.F.R. Part 51 are hereby adopted by reference as they existed on July 1, 2010.

4. Title 40 C.F.R. § 52.21 is hereby adopted by reference as it existed on July 18, 2011.

5. Appendix E of 40 C.F.R. Part 52 is hereby adopted by reference as it existed on July 1, 2011.

6. The following subparts of 40 C.F.R. Part 60 are hereby adopted by reference:

(a) Subpart A, except §§ 60.4, 60.8(b)(2), 60.8(b)(3), 60.8(g) and 60.11(e), as it existed on July 1, 2011;

(b) Section 60.21 of Subpart B, as it existed on July 1, 2011;

(c) Subparts C, Cb, Cc, Cd, Ce, D, Da, Db, Dc, E, Ea, Eb, Ec, F, G, H, I, J, K, Ka, Kb, L, M, N, Na, O, P, Q, R, S, T, U, V, W, X, Y, Z, AA, AAa, BB, CC, DD, EE, GG, HH, KK, LL, MM, NN, PP, QQ, RR, SS, TT, UU, VV,

VVa, WW, XX, BBB, DDD, FFF, GGG, GGGa, HHH, III, JJJ, KKK, LLL, NNN, OOO, PPP, QQQ, RRR, SSS, TTT, UUU, VVV, WWW, AAAA, CCCC, DDDD, EEEE, FFFF and KKKK as they existed on July 1, 2011;

(d) Subpart HHHH, except §§ 60.4105(b)(2), 60.4106, 60.4120 to 60.4142, inclusive, 60.4153(a) and (b) and 60.4176, as it existed on June 9, 2006; and

(e) Subparts IIII and JJJJ as they existed on August 29, 2011.

7. Appendices A, B and F of 40 C.F.R. Part 60 are hereby adopted by reference:

(a) Appendix A as it existed on July 1, 2010; and

(b) Appendices B and F as they existed on July 1, 2011.

8. Subparts A, C, D, E, F, H, I, J, K, L, N, O, P, Q, R, T, V, W, Y, BB and FF of 40 C.F.R. Part 61 are hereby adopted by reference as they existed on July 1, 2010.

9. Appendix B of 40 C.F.R. Part 61 is hereby adopted by reference as it existed on July 1, 2010.

10. The following subparts of 40 C.F.R. Part 63 are hereby adopted by reference:

(a) Subpart A as it existed on July 1, 2010;

(b) Subparts B, C, F, G, H, I, J, L, M, N, O, Q, R, S, T, U, W, X, Y, AA, BB, CC, DD, EE, GG, HH, II, JJ, KK, LL, MM, OO, PP, QQ, RR, SS, TT, UU, VV, WW, XX, YY, CCC, DDD, EEE, GGG, HHH, III, JJJ, LLL, MMM, NNN, OOO, PPP, QQQ, RRR, TTT, UUU, VVV, XXX, AAAA, CCCC, DDDD, EEEE, FFFF, GGGG, HHHH, IIII, JJJJ, KKKK, MMMM, NNNN, OOOO, PPPP, QQQQ, RRRR, SSSS, TTTT, UUUU, VVVV, WWWW, XXXX, YYYY, ZZZZ, AAAAA, BBBB, CCCC, DDDD, EEEE, FFFF, GGGG, HHHH, JJJJ, KKKK, LLLL, MMMM, NNNN, PPPP, QQQQ, SSSS, WWWW, YYYYY, ZZZZ, BBBB, CCCC, DDDD, EEEE, FFFF, GGGG, HHHH, JJJJ, LLLL, MMMM, NNNN, OOOO, PPPP, QQQQ, RRRR, SSSS, TTTT, VVVV, XXXXX, ZZZZZ, AAAAAA, BBBB, CCCC and EEEEE, as they existed on July 1, 2011; and

(c) Subpart WWWW as it existed on October 19, 2011.

11. Appendix A of 40 C.F.R. Part 63 is hereby adopted by reference as it existed on July 1, 2011.

12. Title 40 C.F.R. Part 72 is hereby adopted by reference as it existed on July 1, 2011. If the provisions of 40 C.F.R. Part 72 conflict with or are not included in [NAC 445B.001](#) to [445B.3689](#), inclusive, the provisions of 40 C.F.R. Part 72 apply.

13. Title 40 C.F.R. Part 76 is hereby adopted by reference as it existed on July 1, 2011. If the provisions of 40 C.F.R. Part 76 conflict with or are not included in [NAC 445B.001](#) to [445B.3689](#), inclusive, the provisions of 40 C.F.R. Part 76 apply.

14. Title 42 of the United States Code, section 7412(b), List of Hazardous Air Pollutants, is hereby adopted by reference as it existed on October 1, 1993.

15. The *Standard Industrial Classification Manual*, 1987 edition, published by the United States Office of Management and Budget, is hereby adopted by reference. A copy of the manual may be obtained, free of charge, from the United States Department of Labor at the Internet address <http://www.dol.gov>.

16. A copy of the publications which contain the provisions adopted by reference in subsections 1 to 14, inclusive, may be obtained from the:

(a) Division of State Library and Archives of the Department of Administration for 10 cents per page.

(b) Government Printing Office, free of charge, at the Internet address <http://www.gpoaccess.gov/nara/index.html>.

17. The following standards of ASTM International are hereby adopted by reference:

(a) ASTM D5504, "Standard Test Method for Determination of Sulfur Compounds in Natural Gas and Gaseous Fuels by Gas Chromatography and Chemiluminescence," set forth in Volume 05.06 of the *2008 Annual Book of ASTM Standards*. A copy of ASTM D5504 is available by mail from ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959, by telephone at (610) 832-9585 or at the Internet address <http://www.astm.org>, for the price of \$40.

(b) ASTM D2234 and D2234M, "Standard Practice for Collection of a Gross Sample of Coal," set forth in Volume 05.06 of the *2008 Annual Book of ASTM Standards*. A copy of ASTM D2234 and D2234M is available by mail from ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959, by telephone at (610) 832-9585 or at the Internet address <http://www.astm.org>, for the price of \$40.

(c) ASTM D2013, "Standard Practice for Preparing Coal Samples for Analysis," set forth in Volume 05.06 of the *2008 Annual Book of ASTM Standards*. A copy of ASTM D2013 is available by mail from ASTM International, 100

Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959, by telephone at (610) 832-9585 or at the Internet address <http://www.astm.org>, for the price of \$46.

(d) ASTM D6784, "Standard Test Method for Elemental, Oxidized, Particle-Bound and Total Mercury in Flue Gas Generated from Coal-Fired Stationary Sources (Ontario Hydro Method)," set forth in Volume 11.07 of the 2008 *Annual Book of ASTM Standards*. A copy of ASTM D6784 is available by mail from ASTM International, 100 Barr Harbor Drive, West Conshohocken, Pennsylvania 19428-2959, by telephone at (610) 832-9585 or at the Internet address <http://www.astm.org>, for the price of \$46.

(e) ASTM D2015, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Adiabatic Bomb Calorimeter," dated April 10, 2000. A copy of ASTM D2015 is available for purchase at the IHS Standards Store, 15 Inverness Way East, M/S A110B, Englewood, Colorado 80112, or at the Internet address <http://global.ihs.com>, for the price of \$56.

(f) ASTM D3286, "Standard Test Method for Gross Calorific Value of Coal and Coke by the Isoperibol Bomb Calorimeter," dated July 10, 1996. A copy of ASTM D3286 is available for purchase at the IHS Standards Store, 15 Inverness Way East, M/S A110B, Englewood, Colorado 80112, or at the Internet address <http://global.ihs.com>, for the price of \$56.

(g) ASTM D1989, "Standard Test Method for Gross Calorific Value of Coal and Coke by Microprocessor Controlled Isoperibol Calorimeters," dated July 10, 1997. A copy of ASTM D1989 is available for purchase at the IHS Standards Store, 15 Inverness Way East, M/S A110B, Englewood, Colorado 80112, or at the Internet address <http://global.ihs.com>, for the price of \$56.

18. For the purposes of the provisions of 40 C.F.R. Parts 60, 61 and 63, adopted by reference pursuant to this section, the Director may not approve alternate or equivalent test methods or alternative standards or work practices.

19. Except as otherwise provided in subsections 12 and 13, the provisions adopted by reference in this section supersede the requirements of [NAC 445B.001](#) to [445B.3689](#), inclusive, for all stationary sources subject to the provisions adopted by reference only if those requirements adopted by reference are more stringent.

20. For the purposes of this section, "administrator" as used in the provisions of 40 C.F.R. Part 60, except Subpart B § 60.21 and Subpart HHHH §§ 60.4101 to 60.4105, inclusive, 60.4107 to 60.4114, inclusive, 60.4151 to 60.4173, inclusive, and 60.4175, and Parts 61 and 63, adopted by reference pursuant to this section, means the Director.

(Added to NAC by Environmental Comm'n, eff. 10-19-83; A 12-5-84; 10-15-85; 8-22-86; 10-22-87; 10-18-88; 9-19-90; 9-4-92; 10-29-93; 12-13-93; 3-29-94; 10-30-95; R105-97, 3-5-98; R126-98, 11-2-98; R022-99, 9-27-99; R103-02, 12-17-2002; R198-03, 4-26-2004; R125-04, 9-24-2004; R037-05, 10-31-2005; R189-05 & R206-05, 5-4-2006; R151-06 & R162-06, 9-18-2006; R057-07, 10-31-2007; R143-07, 1-30-2008; R076-08, 8-26-2008; R190-08, 4-23-2009; R088-09, 11-25-2009; R040-10, 7-22-2010; R014-11 & R015-11, 10-26-2011; R129-11, 5-30-2012)

## **Nevada Revised Statutes**

### **Title 18 Chapter 233B, Nevada Administrative Procedure Act:**

#### **NRS 233B.060 Notice of adoption, amendment or repeal of permanent or temporary regulation; adoption of permanent regulation after adoption of temporary regulation.**

1. Except as otherwise provided in subsection 2 and [NRS 233B.061](#), before adopting, amending or repealing:

(a) A permanent regulation, the agency must, after receiving the approved or revised text of the proposed regulation prepared by the Legislative Counsel pursuant to [NRS 233B.063](#), give at least 30 days' notice of its intended action, unless a shorter period of notice is specifically permitted by statute.

(b) A temporary regulation, the agency must give at least 30 days' notice of its intended action, unless a shorter period of notice is specifically permitted by statute.

2. Except as otherwise provided in subsection 3, if an agency has adopted a temporary regulation after notice and the opportunity for a hearing as provided in this chapter, it may adopt, after providing a second notice and the opportunity for a hearing, a permanent regulation, but the language of the permanent regulation must first be approved or revised by the Legislative Counsel and the adopted regulation must be approved by the Legislative Commission or the Subcommittee to Review Regulations appointed pursuant to subsection 6 of [NRS 233B.067](#).

3. If the Public Utilities Commission of Nevada has adopted a temporary regulation after notice and the opportunity for a hearing as provided in this chapter, it may adopt a substantively equivalent permanent regulation without further notice or hearing, but the language of the permanent regulation must first be approved or revised by the Legislative Counsel and the adopted regulation must be approved by the Legislative Commission or the Subcommittee to Review Regulations.

(Added to NRS by 1965, 964; A 1973, 621; 1975, 1157, 1413; 1977, 1386, 1547, 1549; 1981, 186; 1983, 1123, 1244; 1995, 130; [1997, 1973](#); [2007, 871](#); [2009, 2284](#))

**NRS 233B.0603 Contents and form of notice of intent to adopt, amend or repeal permanent or temporary regulation; solicitation of comments from public or affected businesses.**

1. The notice of intent to act upon a regulation required pursuant to [NRS 233B.060](#) must:

(a) Include:

(1) A statement of the need for and purpose of the proposed regulation.

(2) If the proposed regulation is a temporary regulation, either the terms or substance of the proposed regulation or a description of the subjects and issues involved.

(3) If the proposed regulation is a permanent regulation, a statement explaining how to obtain the approved or revised text of the proposed regulation prepared by the Legislative Counsel pursuant to [NRS 233B.063](#).

(4) A statement of the estimated economic effect of the regulation on the business which it is to regulate and on the public. These must be stated separately and in each case must include:

(I) Both adverse and beneficial effects; and

(II) Both immediate and long-term effects.

(5) A statement identifying the methods used by the agency in determining the impact on a small business prepared pursuant to subsection 3 of [NRS 233B.0608](#).

(6) The estimated cost to the agency for enforcement of the proposed regulation.

(7) A description of any regulations of other state or local governmental agencies which the proposed regulation overlaps or duplicates and a statement explaining why the duplication or overlapping is necessary. If the regulation overlaps or duplicates a federal regulation, the notice must include the name of the regulating federal agency.

(8) If the regulation is required pursuant to federal law, a citation and description of the federal law.

(9) If the regulation includes provisions which are more stringent than a federal regulation that regulates the same activity, a summary of such provisions.

(10) The time when, the place where and the manner in which interested persons may present their views regarding the proposed regulation.

(b) If the proposed regulation is a temporary regulation, state each address at which the text of the proposed regulation may be inspected and copied.

(c) Include an exact copy of the provisions of subsection 2 of [NRS 233B.064](#).

(d) Include a statement indicating whether the regulation establishes a new fee or increases an existing fee.

(e) Be mailed to all persons who have requested in writing that they be placed upon a mailing list, which must be kept by the agency for that purpose.

(f) Be submitted to the Legislative Counsel Bureau for inclusion in the Register of Administrative Regulations created pursuant to [NRS 233B.0653](#). The publication of a notice of intent to act upon a regulation in the Register does not satisfy the requirements for notice set forth in paragraph (e).

2. The Attorney General may by regulation prescribe the form of notice to be used.

3. In addition to distributing the notice to each recipient of the agency's regulations, the agency shall also solicit comment generally from the public and from businesses to be affected by the proposed regulation.

(Added to NRS by 1983, 1124; A 1995, 130, 239; [1997, 184, 1390](#); [2005, 1479](#); [2007, 872](#))

**NRS 233B.061 Proposed permanent or temporary regulation: Public comment; workshop; public hearing; applicability of Open Meeting Law.**

1. All interested persons must be afforded a reasonable opportunity to submit data, views or arguments upon a proposed regulation, orally or in writing.

2. Before holding the public hearing required pursuant to subsection 3, an agency shall conduct at least one workshop to solicit comments from interested persons on one or more general topics to be addressed in a proposed

regulation. Not less than 15 days before the workshop, the agency shall provide notice of the time and place set for the workshop:

(a) In writing to each person who has requested to be placed on a mailing list; and

(b) In any other manner reasonably calculated to provide such notice to the general public and any business that may be affected by a proposed regulation which addresses the general topics to be considered at the workshop.

3. With respect to substantive regulations, the agency shall set a time and place for an oral public hearing, but if no one appears who will be directly affected by the proposed regulation and requests an oral hearing, the agency may proceed immediately to act upon any written submissions. The agency shall consider fully all written and oral submissions respecting the proposed regulation.

4. An agency shall not hold the public hearing required pursuant to subsection 3 on the same day that the agency holds the workshop required pursuant to subsection 2.

5. Each workshop and public hearing required pursuant to subsections 2 and 3 must be conducted in accordance with the provisions of [chapter 241](#) of NRS.

(Added to NRS by 1983, 1125; A 1989, 571; [1997, 185](#); [2005, 1407](#); [2007, 873](#); [2009, 2284](#))

## **Title 40 Chapter 445B, Air Pollution:**

### **NRS 445B.100 Declaration of public policy.**

1. It is the public policy of the State of Nevada and the purpose of [NRS 445B.100](#) to [445B.640](#), inclusive, to achieve and maintain levels of air quality which will protect human health and safety, prevent injury to plant and animal life, prevent damage to property, and preserve visibility and scenic, esthetic and historic values of the State.

2. It is the intent of [NRS 445B.100](#) to [445B.640](#), inclusive, to:

(a) Require the use of reasonably available methods to prevent, reduce or control air pollution throughout the State of Nevada;

(b) Maintain cooperative programs between the State and its local governments; and

(c) Facilitate cooperation across jurisdictional lines in dealing with problems of air pollution not confined within a single jurisdiction.

3. The quality of air is declared to be affected with the public interest, and [NRS 445B.100](#) to [445B.640](#), inclusive, are enacted in the exercise of the police power of this State to protect the health, peace, safety and general welfare of its people.

4. It is also the public policy of this State:

(a) To provide for the integration of all programs for the prevention of accidents in this State involving chemicals, including, without limitation, accidents involving hazardous air pollutants, highly hazardous chemicals, highly hazardous substances and extremely hazardous substances; and

(b) Periodically to retire a portion of the emission credits or allocations specified in [NRS 445B.235](#) that may otherwise be available for banking or for sale pursuant to that section.

(Added to NRS by 1971, 1191; A 1993, 2851; [2007, 1023, 3311](#))

## **APPENDIX B**

### **Ambient Air Monitoring Network Plan 2012**

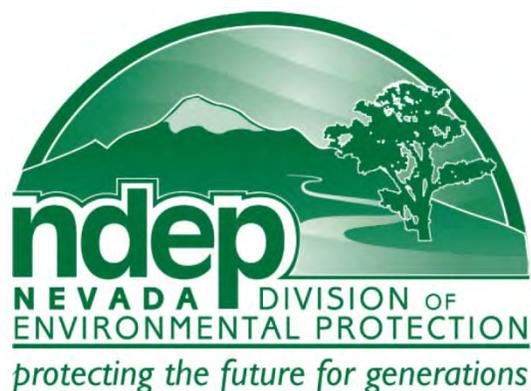
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B.1 AMBIENT AIR QUALITY NETWORK PLAN 2012

B.2 EPA FEBRUARY 28, 2013 REVIEW LETTER

# **AMBIENT AIR MONITORING NETWORK PLAN**

**2012**



## **STATE OF NEVADA DIVISION OF ENVIRONMENTAL PROTECTION BUREAU OF AIR QUALITY PLANNING**

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## Acronyms and Abbreviations

CAA:	Clean Air Act
AQS:	Air Quality System
BAQP:	Bureau of Air Quality Planning
BAM:	Beta Attenuation Monitor
CFR:	Code of Federal Regulations
CO:	Carbon Monoxide
DCNR:	Department of Conservation and Natural Resources
FEM:	Federal Equivalent Method
FRM:	Federal Reference Method
IMPROVE:	Interagency Monitoring of Protected Visual Environments
NAAQS:	National Ambient Air Quality Standard
NAC:	Nevada Administrative Code
NDEP:	Nevada Division of Environmental Protection
O <sub>3</sub> :	Ozone
PM:	Particulate Matter (2.5 or 10 microns)
SLAMS:	State and Local Air Monitoring Station
SPMS:	Special Purpose Monitoring Station
USEPA:	United States Environmental Protection Agency

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## **Overview**

The monitoring program of the Nevada Division of Environmental Protection (NDEP) operates an ambient air quality monitoring network of gaseous and particulate pollutant monitors. The monitors are located in small communities throughout rural Nevada. In the metropolitan areas of Reno and Las Vegas; the Washoe County District Health Department, Air Quality Management Division and the Clark County Department of Air Quality and Environmental Management operate and maintain their respective monitoring networks separate from NDEP and submit their Network Plan independently to the United States Environmental Protection Agency (USEPA).

NDEP regulates air quality to protect public health and the environment. Monitoring data is a crucial component of regulations used to determine compliance with the USEPA primary and secondary air quality standards. Other important uses of these monitors include: support and issuance of air quality forecasts, support of long-term health assessments, and tracking long-term air quality both to gauge effectiveness of emission control and abatement strategies and to quantify accuracy of ambient pollutant monitoring.

## **Goals**

NDEP created an ambient air quality monitoring program to provide useful and accurate information on air quality, which is used to evaluate the success of the State's air quality programs. The Clean Air Act of 1970, and subsequent amendments, defines air quality standards for various air pollutants necessary to protect the public from injurious pollution concentrations. Air pollution concentrations that exceed the National Ambient Air Quality Standard (NAAQS) can cause a public health hazard, nuisance, annoyance, or damage to flora, fauna and personal property.

The NAAQS, published by the USEPA, can be found in 40 Code of Federal Regulations (CFR) Part 50, which defines the levels of air quality necessary to protect human health and welfare. An area is considered to be in nonattainment for a pollutant if it has violated the NAAQS for that pollutant. The CFR includes procedures for evaluating measured air quality

against the NAAQS. State air quality standards can be found in Nevada Administrative Code (NAC) 445B.22097.

## **Background**

The State of Nevada has three jurisdictions which independently manage their own air programs as designated by statute: Department of Conservation and Natural Resources (DCNR), Division of Environmental Protection (NDEP), Bureau of Air Quality Planning (BAQP); Washoe County District Health Department, Air Quality Management Division; and Clark County Department of Air Quality and Environmental Management.

State agencies that conduct ambient air monitoring using State and Local Air Monitoring Stations (SLAMS) or Special Purpose Monitoring Stations (SPMS), must use Federal Reference Methods (FRM) or Federal Equivalent Methods (FEM) that comply with federal quality assurance requirements listed in 40 CFR 58, Appendix A. In conjunction with the Network Plan, a BAQP quality assurance plan was developed to form the framework for planning, implementing, assessing and reporting work performed by the BAQP and for implementing quality assurance and quality control protocols.

The Ambient Air Monitoring Program Quality Assurance Project Plan (QAPP) was developed to address quality management as well as quality assurance. The QAPP defines the policies, procedures, specifications, standards, and documentation necessary to: 1) provide data of adequate quality to meet monitoring objectives, and 2) minimize loss of air quality data due to malfunctions or out-of-control conditions. As part of the QAPP, the Quality Management Plan (QMP) describes the organizational structure, functional responsibilities of management and staff, lines of authority, and required interfaces between planning, implementing, assessing and reporting activities involving environmental data operations.

Additionally, the BAQP has developed ambient monitoring guidelines in order to ensure that ambient air quality data collected, at regulated facilities in the State, are of the highest quality and conform to federal requirements for quality assurance listed under 40 CFR 58.

Ambient air quality monitoring data must be certified on an annual basis as accurate and complete. The certification process begins with the complete submittal of all SLAMS data to the federal Air Quality System (AQS) for the calendar year. Submittal of data into AQS for 2010 has been accomplished. BAQP is planning on completing the entry of 2011 data into AQS by the May 1, 2012, deadline. Precision and accuracy reports and certification of that data should also be submitted within that time frame.

### **Network Design**

There are currently nine ambient air quality monitoring stations in Nevada under the jurisdiction of NDEP. Air quality monitoring is represented entirely by SLAMS. The ozone monitoring conducted by NDEP is done on a seasonal basis from April 1 to October 31 of each year. The EPA's approval of a seasonal ozone monitoring schedule for NDEP is documented in Appendix A. There are two meteorological stations, one in Carson City and the other in Pahrump. These are used to confirm the local meteorological data from the monitoring stations.

In addition to these three independent monitoring networks, air quality monitoring is conducted through the Interagency Monitoring of Protected Visual Environments (IMPROVE) network by the federal land management agencies. There are two IMPROVE monitoring sites in Nevada, at the Jarbidge Wilderness area and Great Basin National Park, Lehman Caves.

The following table shows the locations and types of monitors operated by NDEP.

**Table 1: NDEP’S Ambient Air Monitoring Network**

Location	Ozone	Carbon Monoxide	PM10
Elko			1 (SLAMS)
Fallon	1 (SLAMS)		
Stateline- Harvey’s		1 (SLAMS)	
Fernley	1 (SLAMS)		
Carson City-5th Street	1(SLAMS)		
Pahrump-Church Site			1 (SLAMS)
Pahrump-Manse Elementary			1 (SLAMS)
Pahrump-Glen Oaks			1 (SLAMS)
Pahrump-Linda Street			1 (SLAMS)
Total	3	1	5

SLAMS – State and Local Air Monitoring Station

### **Minimum Monitoring Requirements**

The USEPA provides minimum site requirements for ozone and particulate matter based on metropolitan statistical area (MSA) population. The NDEP’s air monitoring network meets or, in most cases, exceeds the minimum network requirements. The monitors currently required in the NDEP monitoring network by the USEPA are located in Stateline (CO), Carson City (O<sub>3</sub>), Fallon (O<sub>3</sub>), Fernley (O<sub>3</sub>) and Pahrump (PM<sub>10</sub>). The Stateline monitoring site is a continuation of a highest concentration site started by the California Air Resources Board (CARB). Through a Maintenance Plan with USEPA, monitoring and maintenance of this site was assumed by NDEP in August 2006. The four PM<sub>10</sub> monitoring sites in Pahrump are required through a Memorandum of Understanding (MOU) between NDEP, USEPA, Nye County and the Town of Pahrump. Otherwise, according to 40 CFR Part 58 Appendix D: Tables D-4 and D-5; sections 4.2, 4.3.2, 4.3.3, 4.4.2 and 4.5, additional monitoring for criteria pollutants is not presently required. The following table outlines the minimum required monitors within the NDEP ambient air monitoring network.

**Table 2: Minimum Monitoring Requirements by Pollutant**

Pollutant	Minimum # of Monitors Required	# of Monitors Active	# of Monitors needed	Location	MSA/CSA	County(ies)	County Pop. (2009)	Design Values
Ozone	3	3	0	Carson City	Carson City MSA	Carson City	55,176	66 ppb (2009-2011)
				Fallon	Fallon MSA	Churchill	24,897	59 ppb (2009-2011)
				Fernley	Rural	Lyon	52,641	64 ppb (2009-2011)
CO	1	1	0	South Lake Tahoe	Sacramento-Arden-Truckee CSA	Douglas	45,464	3.1 ppm (2010-2011)
Lead*	0	0	0	N/A	N/A	N/A	N/A	N/A
SO2*	0	0	0	N/A	N/A	N/A	N/A	N/A
NO2*	0	0	0	N/A	N/A	N/A	N/A	N/A
PM10	4	5	0	Elko (1)	Elko MSA	Elko	47,896	0.8 (2009-2011)
				Pahrump (4)	Pahrump MSA/Las Vegas-Paradise-Pahrump CSA	Nye	44,324	Manse = 2.5 Church = 0.0 Glen Oaks = N/A Linda Street = 0.0 (2009-2011)
Total	8	9	0					

\*Based on 40 CFR Part 58 Appendix D: Tables D-4 and D-5; sections 4.2, 4.3.2, 4.3.3, 4.4.2 and 4.5, additional monitoring for criteria pollutants is not presently required. Additionally, based on the 2008 Lead NAAQS Final Rule, 2010 SO<sub>2</sub> NAAQS Final Rule and the 2010 NO<sub>2</sub> NAAQS Final Rule, NDEP is not required to monitor for these criteria pollutants.

### Changes in Monitoring Network

Over the next 12 months, two significant changes will occur throughout the monitoring network that will impact data submittal for the 2012 year. NDEP will be relocating the ozone monitor currently located at the Carson City Maintenance Yard, to a comparable location 2.5 miles west at a vacant lot with access from Carson Street. This move is necessitated by the city of Carson City re-purposing use of this location. Currently, there are plans and agreements for NDEP to begin moving equipment to this new site with objective to gain 9 months of collocated data until March 2013, which is the approximate date that the NDEP must move from the Carson City Maintenance Yard. The USEPA will be notified when data collection and submittal at the new monitoring site is commenced. The second change will be the removal of the Stateline CO monitor. The NDEP plans to discontinue CO monitoring

at Stateline (located at Harvey's Resort and Hotel on Hwy 50) by June 30, 2012. The NDEP concludes that 33 years of clean data, all of it under 80 percent of the NAAQS and most recently at 34 percent, with on-going downward trends is sufficient evidence of continued attainment through 2024 and satisfies 40 CFR 58.14 requirements for discontinuance.

In 2011, NDEP was informed that we had to relocate our PM<sub>10</sub> monitor located at the Manse School in Pahrump due to the school closing. In February 2011, NDEP submitted a letter to the EPA requesting approval to relocate the monitor. In March of 2011, NDEP received approval to move the existing monitor to the Nye County School District building. However, the Pahrump School District found a new use for the school allowing NDEP to remain at the existing site. At this time, NDEP will continue to monitor at the Manse School. If needed, NDEP has access to the Nye County School District building for our back-up site.

For the next year, NDEP will be evaluating the need to establish a PM<sub>2.5</sub> monitoring network. Over the next five years, through 2017, NDEP will evaluate our current network to determine if any new sites or monitors need to be added to the existing monitoring network.

### **Purpose of Monitors**

The purpose of the Nevada Air Monitoring Network is to provide useful and accurate information on air quality, which is used to evaluate the success of the State's air quality programs. To accomplish this task, the NAAQS is used to identify the criteria pollutants: CO (Carbon Monoxide), Pb (Lead), NO<sub>2</sub> (Nitrogen Dioxide), O<sub>3</sub> (Ozone), particulate matter (PM<sub>10</sub> and PM<sub>2.5</sub>), and SO<sub>2</sub> (Sulfur Dioxide). Measuring pollutant concentrations in outdoor air and comparing the measured concentrations to corresponding standards help to classify ambient air quality status of an area as either attainment or nonattainment. The NAAQS is broken down into primary and secondary standards. Primary standards are those established to protect public health. Secondary standards are those established to protect the public welfare from adverse pollution effects on soils, water, vegetation, man-made materials, animals, weather, visibility, climate, property, and the economy. The scientific criteria upon which the standards are based are reviewed periodically by the USEPA, who may reestablish or change the standards according to its findings.

A pollutant measurement that is greater than the ambient air quality standard for its specific averaging time is called an exceedance. This is not necessarily a synonym for a violation; for each pollutant there are specific rules about how many exceedances are allowed in a given time period before a pattern of exceedances is considered to be a violation of the NAAQS. A violation may result in regulatory action to clean-up the area's air. Exceptions are made to allow for certain limited exceedances of the standard that may occur, for example, during an unusual weather pattern or wildfire (exceptional events). Regulatory action is typically reserved for cases where the exceedances are too large or too frequent.

Historically, ambient air quality monitoring by BAQP has looked at trends in air quality to aid in the local planning process. Traffic, wood burning stoves, and growth related activities have prompted air quality monitoring in specific areas around the State. Data from these sites has led to public education and outreach to communities identifying the potential health effects caused by air pollutants in the environment. Ordinances controlling surface area disturbances and other related activities that produce dust have also been implemented with the help of the monitoring sites.

## **Overview of Monitored Parameters**

### **Carbon Monoxide (CO)**

CO is a poisonous gas that, when introduced into the bloodstream, inhibits the delivery of oxygen to body tissue. The health risk is greatest for individuals with cardiovascular disease.

### **Ozone (O<sub>3</sub>)**

Ground-level ozone, or photochemical smog, is not emitted into the atmosphere as ozone, but rather is formed by the reactions of other pollutants. The primary pollutants entering into this reaction, VOCs and oxides of nitrogen, create ozone in the presence of sunlight. Ozone is a strong irritant of the upper respiratory system and also causes damage to crops.

### **Particulate Matter (PM<sub>10</sub>)**

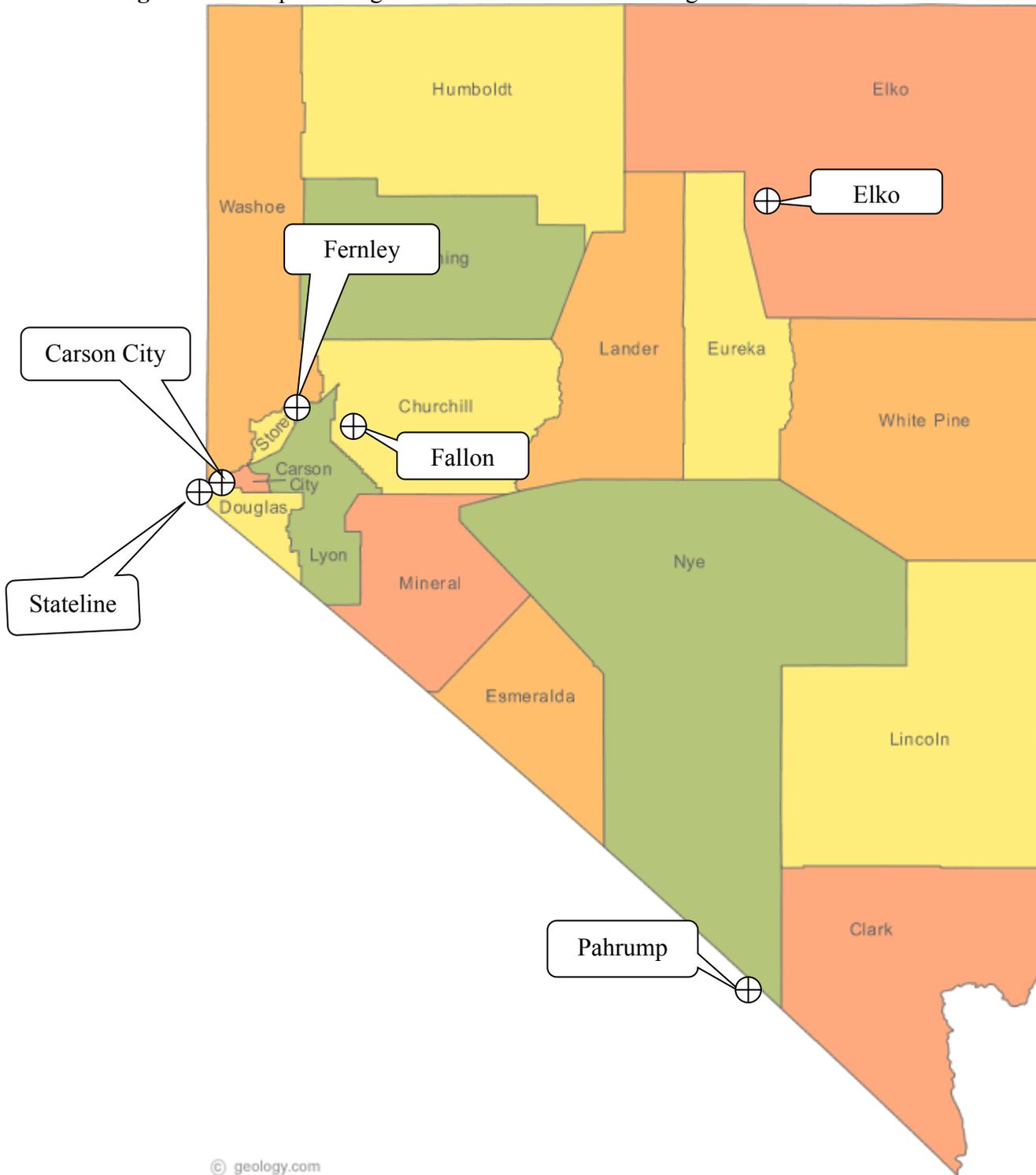
Particulate matter with an aerodynamic diameter of 10 microns or less is emitted from transportation and industrial sources. Exposure to particle pollution is linked to a variety of significant health problems ranging from aggravated asthma to premature death in people with heart and lung disease.

**Fine Particulate Matter (PM<sub>2.5</sub>)**

Fine particulate matter with a diameter of 2.5 microns or less is created primarily from industrial processes and fuel combustion. These particles are breathed deeply into the lungs. Exposure to particle pollution is linked to a variety of significant health problems ranging from aggravated asthma to premature death in people with heart and lung disease.

## Site Map

**Figure 1:** A map showing the locations of the monitoring stations maintained in NDEP's network.



<sup>1</sup> Map template from:  
<http://geology.com/state-map/maps/nevada-county-map.gif>

## Elko: Detailed Site Information

Prior to 1992 the location for this sampler was the fire station at 723 Railroad Street (ID #32-007-003) in a commercial area. In November of 1992 this continuous PM<sub>10</sub> monitoring site was relocated to the roof of the State offices at 850 Elm Street in a predominantly residential area. The monitoring objective was to determine typical concentration/population oriented. The manual sampler was replaced with a continuous (TEOM) PM<sub>10</sub> monitor in December 1998. In September 2008, the TEOM monitor was closed and a new BAM 1020 monitor was sited at the Elko Grammar School #2.

<b>Site Name</b>	<b>Elko</b>
<b>AQS ID</b>	<b>32-007-0005</b>
<b>GIS Coordinates</b>	<b>Lat +40.838350 Long -115.766029</b>
<b>Location</b>	<b>Elko Grammar School #2</b>
<b>Address</b>	<b>1055 7<sup>th</sup> Street</b>
<b>County</b>	<b>Elko</b>
<b>Distance to Road</b>	<b>18 Meters</b>
<b>Traffic Count</b>	<b>1400 AADT (2009) Station #0070203</b>
<b>Groundcover</b>	<b>Asphalt</b>
<b>Representative Area</b>	<b>Elko MSA</b>
<b>Pollutant</b>	<b>PM10 /81102</b>
<b>Monitor Objective</b>	<b>Typ. Conc./Population Oriented</b>
<b>Spatial Scale</b>	<b>Neighborhood</b>
<b>Sampling Method</b>	<b>Met One BAM-1020</b>
<b>Analysis Method</b>	<b>EQPM-0798-122</b>
<b>Start Date</b>	<b>09/25/2008</b>
<b>Operation Schedule</b>	<b>Continuous</b>
<b>Sampling Season</b>	<b>All Year</b>
<b>Probe Height</b>	<b>2.6 Meters</b>
<b>Dist. fm. supporting structure</b>	<b>Vertical Distance =1.2 meters</b>
<b>Dist. fm. obstructions on roof</b>	<b>N/A</b>
<b>Distance fm. trees</b>	<b>27 Meters</b>
<b>Distance to furnace or incinerator flue</b>	<b>N/A</b>
<b>Unrestricted airflow</b>	<b>360 degrees</b>
<b>Probe material</b>	<b>N/A</b>
<b>Residence time</b>	<b>N/A</b>
<b>Changes in the next 18 months?</b>	<b>No</b>
<b>Suitable for PM 2.5 comparison?</b>	<b>N/A</b>
<b>Frequency of flow rate verification</b>	<b>Monthly</b>
<b>Frequency of one point QC check (gaseous)</b>	<b>N/A</b>
<b>Last Annual Performance Evaluation (Gaseous)</b>	<b>N/A</b>
<b>Last two semi-annual flow rate audits for PM</b>	<b>12/12/11 05/02/2012</b>

Figure 2: Elko Grammar School #2, 1055 7th Street, Elko, NV. PM 10 Monitor

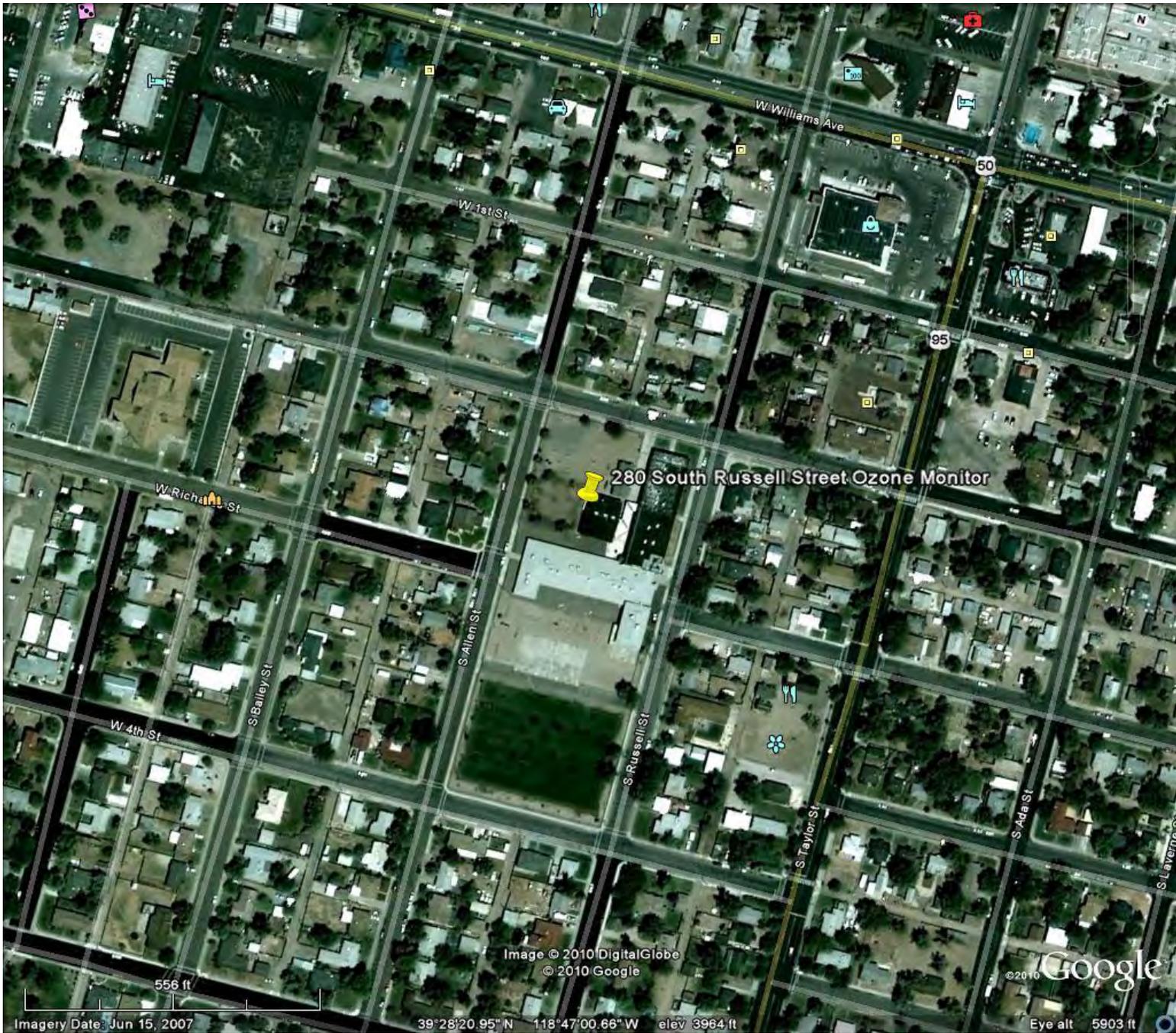


## Fallon: Detailed Site Information

The ozone monitoring site at 280 South Russell Street is at the West End Elementary School in a residential neighborhood that may be affected by agricultural operations surrounding the City of Fallon. The monitoring objective is to determine typical concentration/population orientation. PM<sub>10</sub> sampling commenced at this site in May 1993 and was discontinued at the end of June 1998. Monitoring for ozone began in October 1999 as an ozone transport site downwind of Reno and Fernley

<b>Site Name</b>	<b>Fallon</b>
<b>AQS ID</b>	<b>32-001-0002</b>
<b>GIS Coordinates</b>	<b>Lat +39.472471 Long -118.783624</b>
<b>Location</b>	<b>West End of Elementary School</b>
<b>Address</b>	<b>280 South Russell Street</b>
<b>County</b>	<b>Churchill</b>
<b>Distance to Road</b>	<b>65 Meters</b>
<b>Traffic Count</b>	<b>410 AADT (2009) Station #0010135</b>
<b>Groundcover</b>	<b>Dirt and Gravel</b>
<b>Representative Area</b>	<b>Fallon MSA</b>
<b>Pollutant</b>	<b>O3/44201</b>
<b>Monitor Objective</b>	<b>Typ. Conc./Population Oriented</b>
<b>Spatial Scale</b>	<b>Neighborhood</b>
<b>Sampling Method</b>	<b>Teledyne API Model 400E</b>
<b>Analysis Method</b>	<b>EQOA-0992-087</b>
<b>Start Date</b>	<b>10/01/1999</b>
<b>Operation Schedule</b>	<b>Seasonal</b>
<b>Sampling Season</b>	<b>April thru October</b>
<b>Probe Height</b>	<b>3.2 Meters</b>
<b>Dist. fm. supporting structure</b>	<b>1 meter from wall</b>
<b>Dist. fm. obstructions on roof</b>	<b>N/A</b>
<b>Distance fm. Trees</b>	<b>Greater than 10 meters</b>
<b>Distance to furnace or incinerator flue</b>	<b>N/A</b>
<b>Unrestricted airflow</b>	<b>180 Degrees</b>
<b>Probe material</b>	<b>Teflon</b>
<b>Residence time</b>	<b>10 seconds</b>
<b>Changes in the next 18 months?</b>	<b>No</b>
<b>Suitable for PM 2.5 comparison?</b>	<b>N/A</b>
<b>Frequency of flow rate verification</b>	<b>N/A</b>
<b>Frequency of one point QC check (gaseous)</b>	<b>Semi-monthly</b>
<b>Last Annual Performance Evaluation (Gaseous)</b>	<b>09/22/2011</b>
<b>Last two semi-annual flow rate audits for PM</b>	<b>N/A</b>

Figure 3: West End Elementary School, 280 S. Russell Street, Fallon, NV. Ozone Monitor



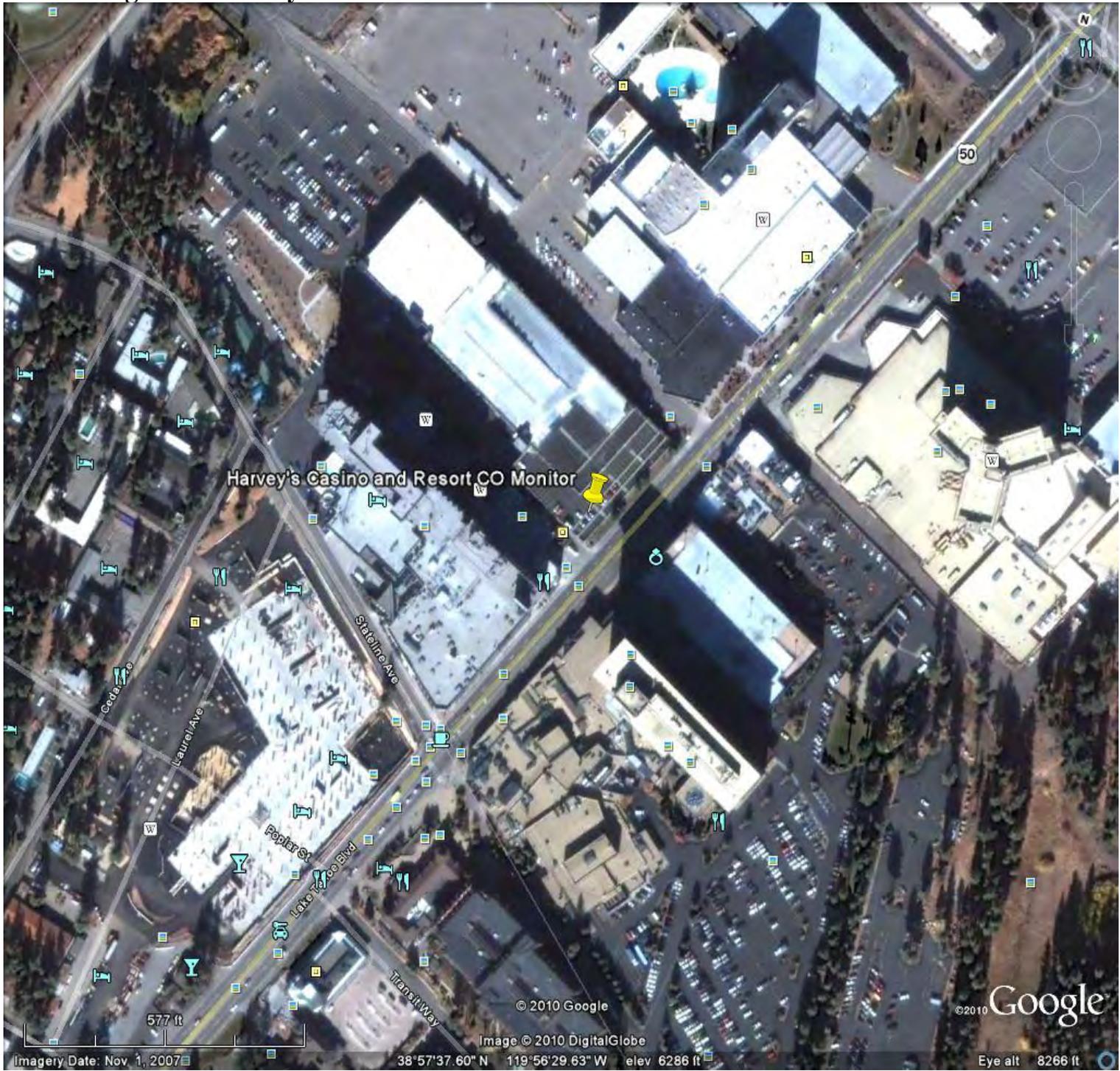
## Harvey's Casino and Resort: Detailed Site Information

This is a "micro-scale" monitoring site for carbon monoxide in the core of the Stateline casino hotel area at Lake Tahoe. The site is designed to monitor the highest CO concentrations at Lake Tahoe, and is, taken to be representative of the California and Nevada sides of the south shore casino district. Monitoring at this site began in October 1999 and was previously conducted by the California Air Resources Board by multi-agency cooperative agreement. Starting in July of 2006, NDEP took over the monitoring responsibility for this site under a maintenance agreement with EPA.

<b>Site Name</b>	<b>Harvey's Casino and Resort</b>
<b>AQS ID</b>	<b>32-005-0009</b>
<b>GIS Coordinates</b>	<b>Lat +38.960579 Long -119.941351</b>
<b>Location</b>	<b>1<sup>st</sup> Level of parking garage facing HWY</b>
<b>Address</b>	<b>Stateline NV 89449</b>
<b>County</b>	<b>Douglas</b>
<b>Distance to Road</b>	<b>9 Meters</b>
<b>Traffic Count</b>	<b>24,000 AADT (2009) Station # 0050044</b>
<b>Groundcover</b>	<b>Paved, asphalt and grass</b>
<b>Representative Area</b>	<b>Sacramento-Arden Arcade-Truckee CSA or rural MSA</b>

<b>Pollutant</b>	<b>CO/42101</b>
<b>Monitor Objective</b>	<b>Highest Concentration</b>
<b>Spatial Scale</b>	<b>Micro</b>
<b>Sampling Method</b>	<b>API Teledyne 300M</b>
<b>Analysis Method</b>	<b>N/A</b>
<b>Start Date</b>	<b>10/01/1999</b>
<b>Operation Schedule</b>	<b>Continuous</b>
<b>Sampling Season</b>	<b>All Year</b>
<b>Probe Height</b>	<b>2.5 Meters</b>
<b>Dist. fm. supporting structure</b>	<b>1 Meter Horizontally</b>
<b>Dist. fm. obstructions on roof</b>	<b>N/A</b>
<b>Distance fm. trees</b>	<b>4 Meters</b>
<b>Distance to furnace or incinerator flue</b>	<b>N/A</b>
<b>Unrestricted airflow</b>	<b>180 Degrees</b>
<b>Probe material</b>	<b>Teflon</b>
<b>Residence time</b>	<b>5 Seconds</b>
<b>Changes in the next 18 months?</b>	<b>Yes (Discontinuation)</b>
<b>Suitable for PM 2.5 comparison?</b>	<b>N/A</b>
<b>Frequency of flow rate verification</b>	<b>N/A</b>
<b>Frequency of one point QC check (gaseous)</b>	<b>Semi-monthly</b>
<b>Last Annual Performance Evaluation (Gaseous)</b>	<b>03/26/2012</b>
<b>Last two semi-annual flow rate audits for PM</b>	<b>N/A</b>

Figure 4: Harvey's Casino and Resort Lake Tahoe NV. CO Monitor

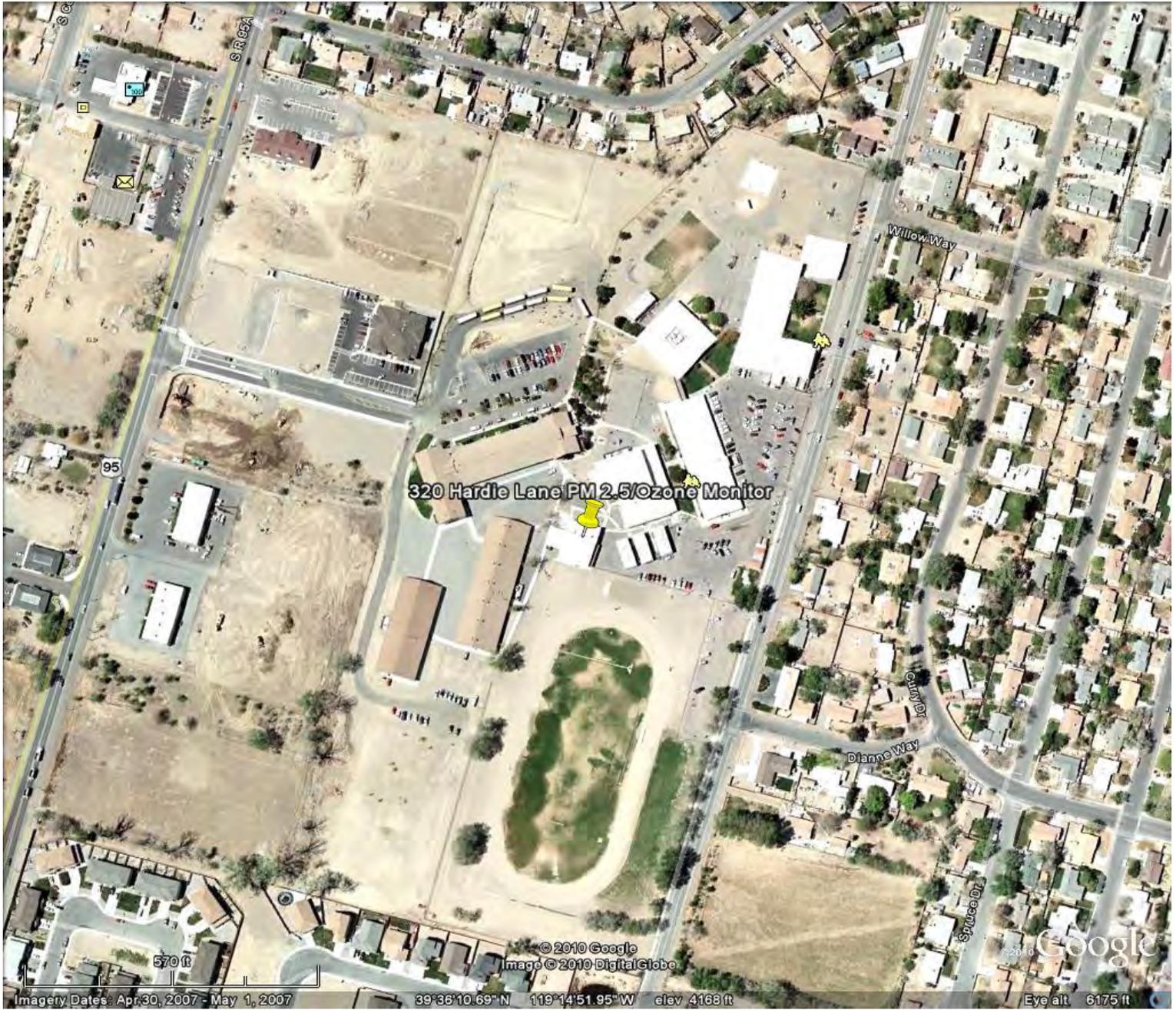


## Fernley Intermediate School: Detailed Site Information

Ozone monitoring is done at the Fernley Intermediate School which is located at 320 Hardie Lane. This is an area of mainly residential and agricultural use. There has recently been a large growth of industry both upwind and downwind of this site. Monitoring for PM<sub>10</sub> at this site commenced on May 1995, to determine the agricultural and industrial source impacts and population exposure. PM<sub>10</sub> sampling was discontinued in November 1998. Ozone monitoring began at this site July 2007. However, ozone monitoring (SPMS) was previously conducted at the Fernley Volunteer Fire Department starting in October 1997 and discontinued on October 2003.

<b>Site Name</b>	<b>Fernley</b>
<b>AQS ID</b>	<b>32-019-0006</b>
<b>GIS Coordinates</b>	<b>Lat +39.602787 Long -119.247741</b>
<b>Location</b>	<b>Fernley Intermediate School</b>
<b>Address</b>	<b>320 Hardie Lane</b>
<b>County</b>	<b>Lyon</b>
<b>Distance to Road</b>	<b>119 Meters</b>
<b>Traffic Count</b>	<b>1300 AADT (2009) Station # 0190119</b>
<b>Groundcover</b>	<b>Paved, cement, gravel and dirt</b>
<b>Representative Area</b>	<b>Rural (Micropolitan Statistical Area)</b>
<b>Pollutant</b>	<b>O3/44201</b>
<b>Monitor Objective</b>	<b>Typ. Conc./Population Oriented</b>
<b>Spatial Scale</b>	<b>Urban</b>
<b>Sampling Method</b>	<b>Teledyne API Model 400E</b>
<b>Analysis Method</b>	<b>EQOA-0992-087</b>
<b>Start Date</b>	<b>07/06/2007</b>
<b>Operation Schedule</b>	<b>Continuous</b>
<b>Sampling Season</b>	<b>April to October</b>
<b>Probe Height</b>	<b>7 Meters</b>
<b>Dist. fm. supporting structure</b>	<b>Vertical Distance above 2.1 Meters</b>
<b>Dist. fm. obstructions on roof</b>	<b>N/A</b>
<b>Distance fm. trees</b>	<b>15 Meters</b>
<b>Distance to furnace or incinerator flue</b>	<b>N/A</b>
<b>Unrestricted airflow</b>	<b>360 Degrees</b>
<b>Probe material</b>	<b>Teflon</b>
<b>Residence time</b>	<b>4 Seconds</b>
<b>Changes in the next 18 months?</b>	<b>No</b>
<b>Suitable for PM 2.5 comparison?</b>	<b>N/A</b>
<b>Frequency of flow rate verification</b>	<b>N/A</b>
<b>Frequency of one point QC check (gaseous)</b>	<b>Semi-monthly</b>
<b>Last Annual Performance Evaluation (Gaseous)</b>	<b>09/22/2011</b>
<b>Last two semi-annual flow rate audits for PM</b>	<b>N/A</b>

**Figure 5: Fernley Intermediate School, 320 Hardie Lane Fernley NV PM 2.5/Ozone Monitor**

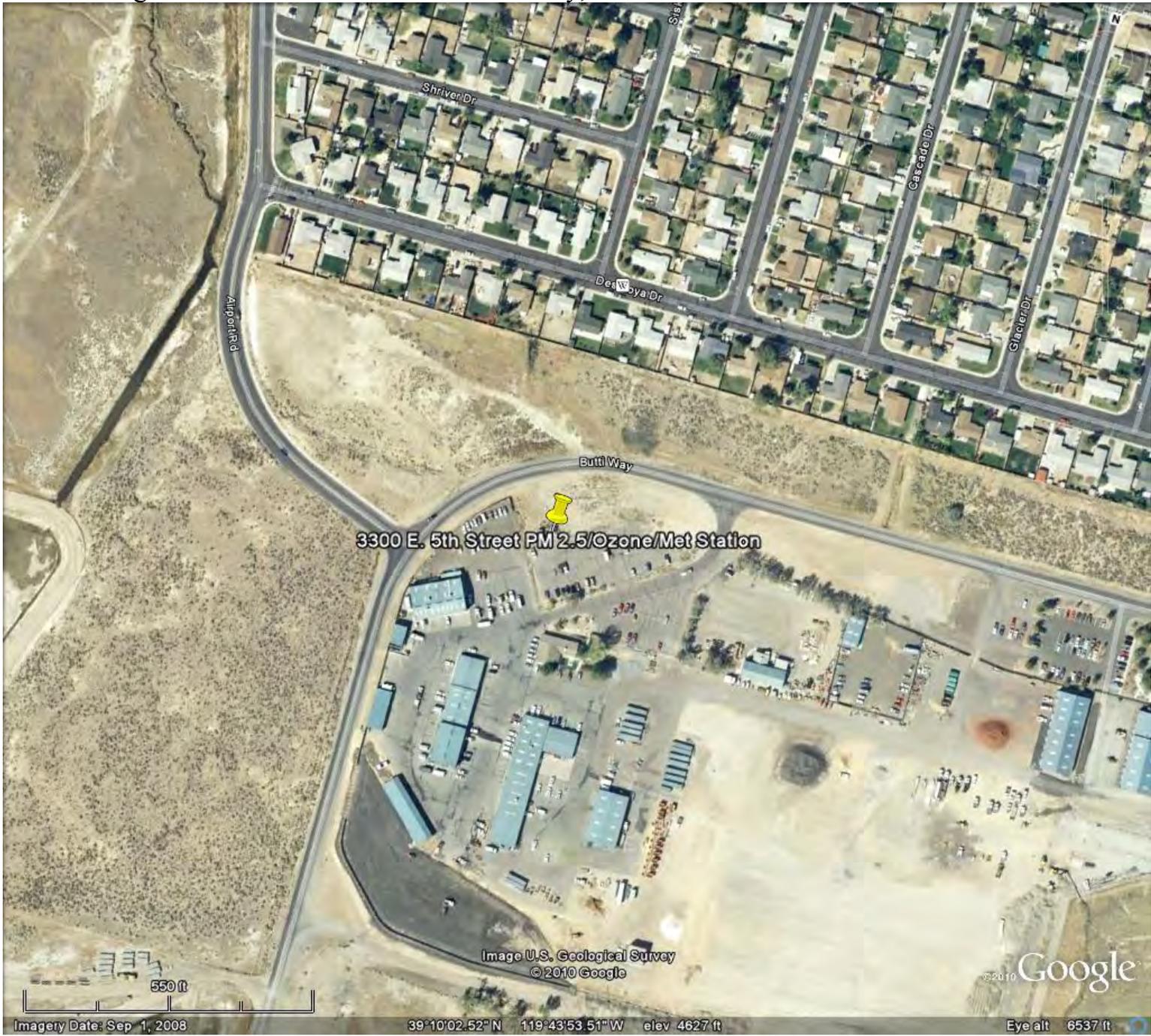


### 3300 E. 5<sup>th</sup> Street: Detailed Site Information

This site is located at 3300 East Fifth Street near the Carson City Public Works Department maintenance yard in a transition area, adjacent to wetlands, the City yard, sewage treatment plant, residential neighborhood and the new highway extension of US 395. The pollutants monitored included carbon monoxide and ozone (through 1989) and PM<sub>10</sub> (March 1991- February 1997). The monitoring objective is to determine typical concentration/population oriented. In 2007, an existing meteorological station was restarted, and as previously stated, the ozone monitor from Long Street site was relocated to East Fifth Street. At the end of 2009, the PM<sub>2.5</sub> was relocated to this monitoring site.

<b>Site Name</b>	<b>East 5<sup>th</sup>. Street</b>	
<b>AQS ID</b>	<b>32-510-0002</b>	
<b>GIS Coordinates</b>	<b>Lat +39.167247 Long -119.731702</b>	
<b>Location</b>	<b>Carson City</b>	
<b>Address</b>	<b>3300 East 5<sup>th</sup> Street</b>	
<b>County</b>	<b>Carson</b>	
<b>Distance to Road</b>	<b>10 Meters</b>	
<b>Traffic Count</b>	<b>3,500 AADT (2009) Station #0250116</b>	
<b>Groundcover</b>	<b>Dirt – Asphalt Parking Lot</b>	
<b>Representative Area</b>	<b>Carson City MSA</b>	
<b>Pollutant</b>	<b>Ozone/44201</b>	
<b>Monitor Objective</b>	<b>Typ. Conc./ Population Oriented</b>	
<b>Spatial Scale</b>	<b>Neighborhood</b>	
<b>Sampling Method</b>	<b>Teledyne API Model 400E</b>	
<b>Analysis Method</b>	<b>EQOA-0992-087</b>	
<b>Start Date</b>	<b>1/1/1989</b>	
<b>Operation Schedule</b>	<b>April – October</b>	
<b>Sampling Season</b>	<b>Seasonal</b>	
<b>Probe Height</b>	<b>10 Meters</b>	
<b>Dist. fm. supporting structure</b>	<b>Vertical distance above 7 meters</b>	
<b>Dist. fm. obstructions on roof</b>	<b>N/A</b>	
<b>Distance fm. trees</b>	<b>N/A</b>	
<b>Distance to furnace or incinerator flue</b>	<b>N/A</b>	
<b>Unrestricted airflow</b>	<b>360 Degrees</b>	
<b>Probe material</b>	<b>Teflon</b>	
<b>Residence time</b>	<b>6 Seconds</b>	
<b>Changes in the next 18 months?</b>	<b>Yes</b>	
<b>Suitable for PM 2.5 comparison?</b>	<b>N/A</b>	
<b>Frequency of flow rate verification</b>	<b>N/A</b>	
<b>Frequency of one point QC check (gaseous)</b>	<b>Semi-monthly</b>	
<b>Last Annual Performance Evaluation (Gaseous)</b>	<b>9/28/2011</b>	
<b>Last two semi-annual flow rate audits for PM</b>	<b>N/A</b>	

Figure 6: 3300 E. Fifth Street Carson City, NV Ozone/Met Site



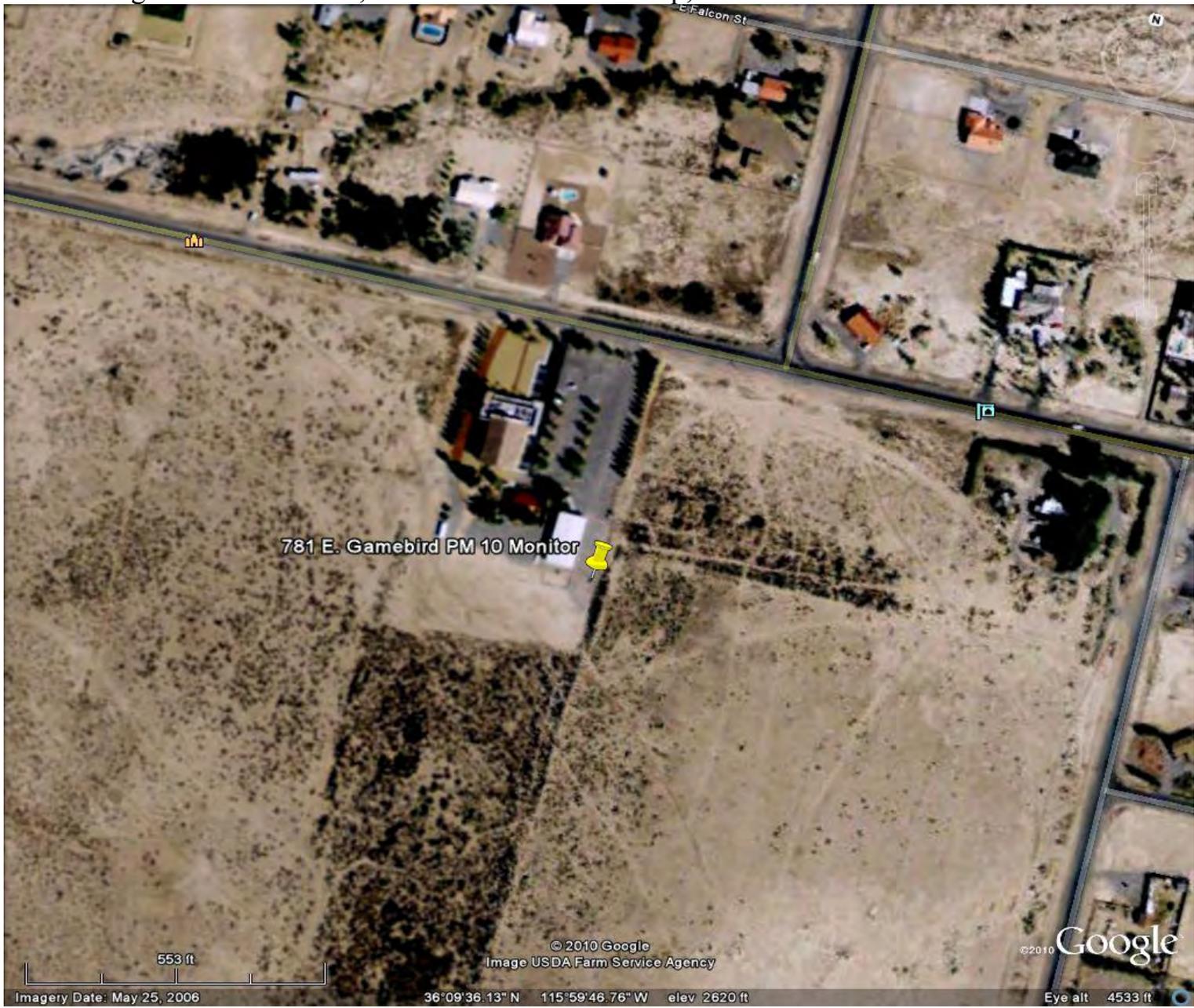
## Church: Detailed Site Information

The Church Site began operation in 2004 to complement the existing three other sites in the Pahrump monitoring network. Monitoring is accomplished with a continuous beta attenuated monitor located in the southeast corner of the Catholic Church. This site represents the southern-most monitoring in Pahrump Valley. The monitoring objective of this site is a significant source of PM<sub>10</sub>. The surrounding area represents residential with little commercial, some native desert with a mix of dirt and paved roads.

<b>Site Name</b>	<b>Church</b>
<b>AQS ID</b>	<b>32-023-0013</b>
<b>GIS Coordinates</b>	<b>Lat + 36.159639 Long -115.996263</b>
<b>Location</b>	<b>Pahrump</b>
<b>Address</b>	<b>781 E. Gamebird</b>
<b>County</b>	<b>Nye</b>
<b>Distance to Road</b>	<b>100 Meters</b>
<b>Traffic Count</b>	<b>1,100 AADT (2009) Station #0230010</b>
<b>Groundcover</b>	<b>Desert</b>
<b>Representative Area</b>	<b>Pahrump MSA; Las Vegas – Paradise – Pahrump MSA</b>

<b>Pollutant</b>	<b>PM10/81102</b>
<b>Monitor Objective</b>	<b>Significant Sources – Dry lake bed 6 miles to the south</b>
<b>Spatial Scale</b>	<b>Urban</b>
<b>Sampling Method</b>	<b>Met One BAM 1020</b>
<b>Analysis Method</b>	<b>EQPM-0798-122</b>
<b>Start Date</b>	<b>2/14/2004</b>
<b>Operation Schedule</b>	<b>Continuous</b>
<b>Sampling Season</b>	<b>All Year</b>
<b>Probe Height</b>	<b>4 Meters</b>
<b>Dist. fm. supporting structure</b>	<b>Vertical distance above 2 meters</b>
<b>Dist. fm. obstructions on roof</b>	<b>N/A</b>
<b>Distance fm. trees</b>	<b>50Meters</b>
<b>Distance to furnace or incinerator flue</b>	<b>N/A</b>
<b>Unrestricted airflow</b>	<b>360 Degrees</b>
<b>Probe material</b>	<b>Aluminum</b>
<b>Residence time</b>	<b>N/A</b>
<b>Changes in the next 18 months?</b>	<b>No</b>
<b>Suitable for PM 2.5 comparison?</b>	<b>N/A</b>
<b>Frequency of flow rate verification</b>	<b>Monthly</b>
<b>Frequency of one point QC check (gaseous)</b>	<b>N/A</b>
<b>Last Annual Performance Evaluation (Gaseous)</b>	<b>N/A</b>
<b>Last two semi-annual flow rate audits for PM</b>	<b>11/3/2011 5/7/2012</b>

Figure 7: Church Site, 781 E. Gamebird Pahrump, NV PM 10 Monitor



## Manse Elementary: Site Detailed Information

The Manse site represents the monitoring objective for highest concentrations of PM<sub>10</sub> in Pahrump. This site replaces the Community Pool site, which at the time it was operating, represented the highest concentrations of PM<sub>10</sub> in Pahrump. Located at 1020 E. Wilson Road, the Manse Elementary site is located on the roof of the school and monitors for PM<sub>10</sub> using the continuous beta attenuation monitor. The area adjacent to this site represents mostly commercial, some residential, and is adjacent to the busiest activity area of Pahrump. This site is located downwind from residential construction developments that have cleared large parcels of ground for building, as well as agricultural areas that cultivate large areas of farm-ground and raise livestock. Roads surrounding this site are both paved and dirt.

<b>Site Name</b>	<b>Manse Elementary</b>
<b>AQS ID</b>	<b>32-023-0014-81102-1</b>
<b>GIS Coordinates</b>	<b>Lat +36.212787 Long -115.994802</b>
<b>Location</b>	<b>Pahrump</b>
<b>Address</b>	<b>1020 E. Wilson Road</b>
<b>County</b>	<b>Nye</b>
<b>Distance to Road</b>	<b>50 Meters</b>
<b>Traffic Count</b>	<b>11,000 AADT (2006) Station #0230006</b>
<b>Groundcover</b>	<b>Gravel Schoolyard</b>
<b>Representative Area</b>	<b>Pahrump MSA; Las Vegas – Paradise – Pahrump MSA</b>

<b>Pollutant</b>	<b>PM10/81102</b>
<b>Monitor Objective</b>	<b>Highest Concentrations</b>
<b>Spatial Scale</b>	<b>Neighborhood</b>
<b>Sampling Method</b>	<b>Met One BAM 1020</b>
<b>Analysis Method</b>	<b>EQPM-0798-122</b>
<b>Start Date</b>	<b>11/17/2005</b>
<b>Operation Schedule</b>	<b>Continuous</b>
<b>Sampling Season</b>	<b>All Year</b>
<b>Probe Height</b>	<b>3.0 Meters</b>
<b>Dist. fm. supporting structure</b>	<b>Vertical distance above 1 meter</b>
<b>Dist. fm. obstructions on roof</b>	<b>N/A</b>
<b>Distance fm. trees</b>	<b>10 Meters</b>
<b>Distance to furnace or incinerator flue</b>	<b>N/A</b>
<b>Unrestricted airflow</b>	<b>360 Degrees</b>
<b>Probe material</b>	<b>Aluminum</b>
<b>Residence time</b>	<b>N/A</b>
<b>Changes in the next 18 months?</b>	<b>No</b>
<b>Suitable for PM 2.5 comparison?</b>	<b>N/A</b>
<b>Frequency of flow rate verification</b>	<b>Monthly</b>
<b>Frequency of one point QC check (gaseous)</b>	<b>N/A</b>
<b>Last Annual Performance Evaluation (Gaseous)</b>	<b>N/A</b>
<b>Last two semi-annual flow rate audits for PM</b>	<b>11/3/2011 5/7/2012</b>

Figure 8: Manse Elementary, 1020 E. Wilson Road Pahrump, NV PM 10 Monitor



## Glen Oaks: Site Detailed Information

The Willow Creek site was started in 2003 and was located at 1500 Red Butte on the roof of a building in which irrigation equipment for the golf course is housed. The monitoring objective of this site was to measure typical concentrations/population oriented of PM<sub>10</sub> using the beta attenuated monitor. The surrounding area adjacent to this site is fairway/golf course and residential structures. Due to closure of the golf course, the Willow Creek site was relocated to the Glen Oaks sewer treatment plant in 2009. The Glen Oaks site is a short distance away from the existing golf course site and the monitoring objective did not change.

<b>Site Name</b>	<b>Glen Oaks</b>
<b>AQS ID</b>	<b>32-023-0012</b>
<b>GIS Coordinates</b>	<b>Lat +36.193469 Long -116.007584</b>
<b>Location</b>	<b>Pahrump</b>
<b>Address</b>	<b>145 Glen Oaks St.</b>
<b>County</b>	<b>Nye</b>
<b>Distance to Road</b>	<b>200 Meters</b>
<b>Traffic Count</b>	<b>1,100 AADT (2009) Station #0230010</b>
<b>Groundcover</b>	<b>Grass/Gravel</b>
<b>Representative Area</b>	<b>Pahrump MSA; Las Vegas – Paradise – Pahrump MSA</b>

<b>Pollutant</b>	<b>PM10/81102</b>
<b>Monitor Objective</b>	<b>Typ. Conc./ Population Oriented</b>
<b>Spatial Scale</b>	<b>Neighborhood</b>
<b>Sampling Method</b>	<b>Met One BAM 1020</b>
<b>Analysis Method</b>	<b>EQPM-0798-122</b>
<b>Start Date</b>	<b>11/20/2003</b>
<b>Operation Schedule</b>	<b>Continuous</b>
<b>Sampling Season</b>	<b>All Year</b>
<b>Probe Height</b>	<b>6.0 Meters</b>
<b>Dist. fm. supporting structure</b>	<b>Vertical distance above 2 meters</b>
<b>Dist. fm. obstructions on roof</b>	<b>N/A</b>
<b>Distance fm. trees</b>	<b>12 Meters</b>
<b>Distance to furnace or incinerator flue</b>	<b>N/A</b>
<b>Unrestricted airflow</b>	<b>360 Degrees</b>
<b>Probe material</b>	<b>Aluminum</b>
<b>Residence time</b>	<b>N/A</b>
<b>Changes in the next 18 months?</b>	<b>No</b>
<b>Suitable for PM 2.5 comparison?</b>	<b>N/A</b>
<b>Frequency of flow rate verification</b>	<b>Monthly</b>
<b>Frequency of one point QC check (gaseous)</b>	<b>N/A</b>
<b>Last Annual Performance Evaluation (Gaseous)</b>	<b>N/A</b>
<b>Last two semi-annual flow rate audits for PM</b>	<b>11/3/2011 5/7/2012</b>

Figure 9: 145 Glen Oaks St., Pahrump, NV PM10 Monitor



## Linda Street: Site Detailed Information

The Linda Street site was started in 2003 and is located at 8825 North Linda Street. The beta attenuated monitor is located on the roof of an old railroad box car and represents not only the northern-most site in the Pahrump monitoring network, but the most rural area. There is some residential surrounding this site, but mainly native desert vegetation with little or no surface disturbances. The monitoring objective for this site is general background levels of PM<sub>10</sub> in Pahrump.

<b>Site Name</b>	<b>Linda Street</b>
<b>AQS ID</b>	<b>32-023-0011-81102-1</b>
<b>GIS Coordinates</b>	<b>Lat +36.349408 Long -116.031976</b>
<b>Location</b>	<b>Pahrump</b>
<b>Address</b>	<b>8825 N. Linda</b>
<b>County</b>	<b>Nye</b>
<b>Distance to Road</b>	<b>20 Meters</b>
<b>Traffic Count</b>	<b>2,200 AADT (2008) Station #0230008</b>
<b>Groundcover</b>	<b>Desert</b>
<b>Representative Area</b>	<b>Pahrump MSA; Las Vegas – Paradise – Pahrump MSA</b>

<b>Pollutant</b>	<b>PM10/81102</b>
<b>Monitor Objective</b>	<b>General Background</b>
<b>Spatial Scale</b>	<b>Urban</b>
<b>Sampling Method</b>	<b>Met One BAM 1020</b>
<b>Analysis Method</b>	<b>EQPM-0798-122</b>
<b>Start Date</b>	<b>5/3/2003</b>
<b>Operation Schedule</b>	<b>Continuous</b>
<b>Sampling Season</b>	<b>All Year</b>
<b>Probe Height</b>	<b>6.7 Meters</b>
<b>Dist. fm. supporting structure</b>	<b>Vertical distance above roof 3 meters</b>
<b>Dist. fm. obstructions on roof</b>	<b>N/A</b>
<b>Distance fm. trees</b>	<b>10 Meters</b>
<b>Distance to furnace or incinerator flue</b>	<b>N/A</b>
<b>Unrestricted airflow</b>	<b>360 Degrees</b>
<b>Probe material</b>	<b>Aluminum</b>
<b>Residence time</b>	<b>N/A</b>
<b>Changes in the next 18 months?</b>	<b>No</b>
<b>Suitable for PM 2.5 comparison?</b>	<b>N/A</b>
<b>Frequency of flow rate verification</b>	<b>Monthly</b>
<b>Frequency of one point QC check (gaseous)</b>	<b>N/A</b>
<b>Last Annual Performance Evaluation (Gaseous)</b>	<b>N/A</b>
<b>Last two semi-annual flow rate audits for PM</b>	<b>11/3/2011 5/7/2012</b>

Figure 10: 8825 N. Linda Pahrump, NV PM 10 Monitor



Appendix A.  
Ozone Seasonality Approval Letter



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105-3901

FEBRUARY 6, 2002

Mr. Chester Sergent, Supervisor  
Ambient Air Monitoring Branch  
Bureau of Air Quality Planning  
Division of Environmental Protection  
Department of Conservation and Natural Resources  
333 W. Nye Lane, Room 138  
Carson City, NV 89706

Dear Mr. <sup>Chest</sup>Sergent:

I have received your letter of January 29, 2002 requesting permission to adjust the ozone monitoring season from year round to April 1 through October 31. We have reviewed the information you provided and approve your request to reduce the ozone monitoring season.

One issue that needs to be addressed is ensuring that EPA's AIRS database is updated to reflect this change in the ozone monitoring season. Failure to do so will result in AIRS showing incomplete ozone data capture rates for the Carson City, Fernley and Fallon monitoring sites. Please have your staff contact our AIRS database manager, Jim Forrest, at (415) 947-4135 to discuss the appropriate procedure for making this change. Please feel free to contact me at (415) 947-4128 if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "R. S. Pallarino".

Robert S. Pallarino  
Technical Support Office  
Air Division

cc: Colleen Cripps, DCNR/DEP  
Jim Forrest, US EPA

STEVE

RECEIVED  
FEB 13 2002  
AIR DIVISION

**Appendix B.  
Manse PM10 Monitor Relocation Approval**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street  
San Francisco, CA 94105-3901  
**MAR 22 2011**

Nevada  
Environmental Protection

**MAR 25 2011**

BAPC/BAQP

**RECEIVED**

MAR 25 2011

ENVIRONMENTAL PROTECTION

Mr. Daren Winkelman, Supervisor  
Ambient Air Quality Monitoring Program  
Bureau of Air Quality Planning  
Nevada Division of Environmental Protection  
901 South Stewart Street, Suite 4001  
Carson City, NV 89701

RE: Response to discontinuation and relocation request of Manse Elementary SLAMS PM<sub>10</sub> monitor (AQS ID: 32-023-0014-81102-1)

Dear Mr. Winkelman: <sup>Daren</sup>

On February 24, 2011 we received your official request for the discontinuation of the PM<sub>10</sub> monitor at Manse Elementary School (AQS ID: 32-023-0014-81102-1) and the subsequent relocation of the PM<sub>10</sub> monitor to the nearby Nye County School District office.

After a visit to the proposed relocation site and upon our review of the documentation you have provided, pursuant to 40 CFR 58.14, we approve your selection of the Nye School District building for replacement of the current Manse Elementary School site. Specifically, we have determined that your request meets the provisions under 40 CFR 58.14(c)(6), namely that logistical problems beyond NDEP's control make it impossible to continue operation at the current site and that the replacement site is a nearby location with the same scale of representation. We request that you list the official site address as 208 Dahlia Street, Pahrump, NV 89048 with GPS coordinates (in decimal degrees): 36.212989, -115.996875.

Thank you for your cooperation throughout this process and please feel free to contact Elfego Felix (415) 947-4141 from my staff or myself (415) 972-3851 with any questions or concerns in regards to this matter.

Sincerely,

Matthew Lakin, Manager  
Air Quality Analysis Office

## **Appendix C. Comment Submittal Information**

The proposed 2012 Ambient Air Monitoring Network Plan is posted on the NDEP website for review and comment for thirty (30) days.

Comments may be emailed to  
Daren Winkelman ([dwinkelman@ndep.nv.gov](mailto:dwinkelman@ndep.nv.gov))  
or mailed to,  
Daren Winkelman  
Ambient Monitoring Program  
Bureau of Air Quality Planning  
901 S. Stewart Street, Suite 4001  
Carson City, Nevada 89701



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
REGION IX  
75 Hawthorne Street  
San Francisco, CA 94105

February 28, 2013

Mr. Rob Bamford, Chief  
Bureau of Air Quality Planning  
Nevada Division of Environmental Protection  
901 S. Stewart, Suite 4001  
Carson City, NV 89701

Dear Mr. Bamford:

Thank you for your submission of the State of Nevada, Division of Environmental Protection, Bureau of Air Quality Planning's 2012 Ambient Air Monitoring Network Plan in July 2012. Based on the information provided in the Plan, EPA approves NDEP's 2012 Plan, except for the five specific items listed in Attachment B where we are not taking action. On December 11, 2012 EPA also approved and provided a separate notification for the relocation of State and Local Air Monitoring Station (SLAMS) ozone monitoring at 3300 E. 5th Street (Site ID: 32-510-0002) to 2601 S. Carson Street in Carson City, NV.

Annual network plans are important documents for regulatory purposes (e.g., State Implementation Plans, designations and redesignations) and public information, in addition to the myriad uses by the air districts. EPA is revising the review process for annual network plans to specifically check and document the comprehensive set of items that are required to be included in the annual network plans per 40 CFR 58.10 in a consistent manner. We have created a checklist that lists all these items and have included it as Attachment A. While the items in the checklist are required by EPA regulations, we acknowledge that we have not specifically requested some of this information in previous annual network plan reviews. We recognize that your plan may not have all the items that we have currently identified and hope to work with you on the inclusion of these items in future plans. To facilitate these changes, EPA has provided detailed feedback in the checklist where information should be included or revised in next year's plan.

Please note that we cannot approve portions of the annual network plan for which the information in the plan is insufficient to judge whether the requirement has been met, or for which the information, as described, does not meet the requirements as specified in 40 CFR 58.10 and the associated appendices. Accordingly, we are not acting on the specific portions of your agency's annual network plan listed in Attachment B.

In addition to the checklist and list of specific plan elements where EPA Region 9 is not taking action, enclosed are additional detailed comments on the plan (Attachment C). All of the comments in Attachments A, B, and C should be addressed in next year's network plan.

EPA also received the comments provided on NDEP's plan by Mr. John Mosley, Environmental Director of the Pyramid Lake Paiute Tribe. EPA supports Mr. Mosley's suggestion that in NDEP's evaluation of their PM<sub>2.5</sub> network, it would be a good idea to examine concentrations from nearby monitoring that has recently been conducted. Although this suggestion does not require a change to NDEP's current network plan, we recommend addressing the recommendation as part of NDEP's next 5-year network assessment.

If you have any questions regarding this letter or the enclosed comments, please feel free to contact me at (415) 972-3851 or Elfego Felix at (415) 947-4141.

Sincerely,

/s/

Matthew Lakin, Manager  
Air Quality Analysis Office

Enclosures:

- A. Annual Air Monitoring Network Plan Checklist
- B. Elements where EPA is Not Taking Action
- C. Additional Detailed Comments

cc: Daren Winkelman, NDEP  
Mike Elges, NDEP

## Attachment A: Annual Air Monitoring Network Plan Checklist

Year: 2012

Agency: Nevada Division of Environmental Protection: Bureau of Air Quality Planning

40 CFR 58.10(a)(1) requires that each Annual Network Plan (ANP) include information regarding the following types of monitors: SLAMS monitoring stations including FRM, FEM, and ARM monitors that are part of SLAMS, NCore stations, STN stations, State speciation stations, SPM stations, and/or, in serious, severe and extreme ozone nonattainment areas, PAMS stations, and SPM monitoring stations.

40 CFR 58.10(a)(1) further directs that, "The plan shall include a statement of purposes for each monitor and evidence that siting and operation of each monitor meets the requirements of appendices A, C, D, and E of this part, where applicable." On this basis, review of the ANPs is based on the requirements listed in 58.10 along with those in Appendices A, C, D, and E.

Please note that this checklist summarizes many of the requirements of 40 CFR Part 58, but does not substitute for those requirements, nor do its contents provide a binding determination of compliance with those requirements. The checklist is subject to revision in the future and we welcome comments on its contents and structure.

### Key:

White = meets the requirement

Grey = Requirement not applicable for this year's plan

Yellow = does not meet or cannot judge the requirement – action requested in next year's plan or outside the ANP process

Green = meets the requirement but action requested to improve next year's plan

	ANP requirement	Citation within 40 CFR 58	Was the info submitted? <sup>1</sup> If yes, page #s. Flag if incorrect <sup>2</sup> ?	Does the information provided <sup>3</sup> meet the req? <sup>4</sup>	Notes
1.	Submit plan by July 1 <sup>st</sup>	58.10 (a)(1)	Yes	Yes.	Electronic plan submitted on July 2, please aim to submit by or prior to July 1.
2.	Statement of purpose for each monitor	58.10 (a)(1)	Yes, p.10-26	Yes	
3.	30-day public comment / inspection period	58.10 (a)(1), 58.10 (a)(2)	Yes, cover letter & p.30	Yes	
4.	Modifications to SLAMS network – case when we are not approving actual system modifications (i.e., we will do it outside the ANP process <sup>5</sup> )	58.10 (a)(2) 58.10(e)	Yes, p.5-6	Yes	-At this time, EPA is not acting on the approval of the Harvey's Stateline CO monitor closure because it is the last monitor in the maintenance area and under 40 CFR 58.14(c)(3), a SIP with a specific reproducible approach to monitoring must first be approved. -EPA approves the Carson City site relocation from 3300 East 5 <sup>th</sup> Street to 2601 S. Carson Street. A separate letter documenting this approval was emailed on 12/12/2012 and should be referenced in next year's plan.
5.	Modifications to SLAMS network – case when we are approving actual system modifications per 58.14(c)	58.10 (a)(2) 58.10 (b)(5) 58.10(e) 58.14 (c)	N/A	N/A- no such modifications were found in EPA's review.	
6.	Does plan include documentation (e.g., attached approval letter) for system modifications that have been approved since last ANP approval?		Yes, p.29	Yes	
7.	NCore plan submitted to Admin. by 7/1/2009	58.10 (a)(3)	N/A		
8.	NCore site operational by 1/1/2011	58.10 (a)(3)	N/A	N/A- NDEP does not operate an NCore site.	
9.	Pb plan for ≥1.0 tpy sources submitted by 7/1/2009	58.10 (a)(4)	N/A		

<sup>1</sup> Response options: N/A (Not Applicable), Yes, No, Incomplete, Incorrect. The responses "Incomplete" and "Incorrect" assume that some information has been provided.

<sup>2</sup> To the best of our knowledge.

<sup>3</sup> Assuming the information is correct

<sup>4</sup> Response options: N/A (Not Applicable) – [reason], Yes, No, Insufficient to Judge.

<sup>5</sup> See 58.14(c)

	<b>ANP requirement</b>	<b>Citation within 40 CFR 58</b>	<b>Was the info submitted?<sup>1</sup> If yes, page #s. Flag if incorrect<sup>2</sup>?</b>	<b>Does the information provided<sup>3</sup> meet the req?<sup>4</sup></b>	<b>Notes</b>
10.	Pb site for $\geq 1.0$ tpy sources operational by 1/1/2010	58.10 (a)(4)	N/A		
11.	Pb plan for 0.5-1.0 tpy submitted by 7/1/2011	58.10 (a)(4)	N/A		
12.	Pb site for 0.5-1.0 tpy sources operational by 12/27/2011	58.10 (a)(4)	N/A	N/A- no Pb monitoring requirement.	
13.	NO <sub>2</sub> plan for area-wide and RA40 sites submitted by 7/1/2012	58.10 (a)(5)	N/A	N/A- no requirement for NO <sub>2</sub> monitoring.	
14.	NO <sub>2</sub> area-wide and RA40 sites operational by 1/1/2013	58.10 (a)(5)	N/A		
15.	NO <sub>2</sub> plan for near-road sites submitted by 7/1/2012	58.10 (a)(5)	N/A	N/A- no requirement for NO <sub>2</sub> monitoring.	
16.	NO <sub>2</sub> near-road sites operational by ? (N/A until 2013 or 2014 plans)	58.10 (a)(5)	N/A		
17.	SO <sub>2</sub> plan for PWEI sites submitted by 2011	58.10 (a)(6)	N/A		
18.	SO <sub>2</sub> sites operational by 1/1/2013	58.10 (a)(6) and 58.13(d)	N/A		
19.	CO plan for 2015 near-road sites submitted by 7/1/2014	58.10 (a)(7) and 58.13(e)(1)	N/A		
20.	CO sites for first phase of CO monitors operational by 1/1/2015	58.10 (a)(7) and 58.13(e)(1)	N/A		
21.	CO plan for 2017 near-road sites by 7/1/2016	58.10 (a)(7) and 58.13(e)(2)	N/A		
22.	CO sites for first phase of CO monitors operational by 1/1/2017	58.10 (a)(7) and 58.13(e)(2)	N/A		
23.	AQS site identification number for each site	58.10 (b)(1)	Yes, p.10-26	Yes	
24.	Location of each site: street address and geographic coordinates	58.10 (b)(2)	Yes, p.10-26	Yes	Please include a street address for Harvey's Casino and Resort site on p.14.
25.	Sampling and analysis method(s) for each measured parameter	58.10 (b)(3)	Yes, p.10-26	Yes	The CO SLAMS monitor at Harvey's Casino listed on p.14 does not appear to report an accurate FRM or FEM instrument code. Upon follow-up

	ANP requirement	Citation within 40 CFR 58	Was the info submitted? <sup>1</sup> If yes, page #s. Flag if incorrect <sup>2</sup> ?	Does the information provided <sup>3</sup> meet the req? <sup>4</sup>	Notes
					clarification with the agency, EPA has verified that a typo was reported for the CO monitor and that it is indeed a designated FRM or FEM. Please ensure this typo is corrected in next year's plan.
26.	Operating schedule for each monitor (see items 62-66)	58.10 (b)(4)	Yes	Yes	(see items 62-66)
27.	Any proposals to remove or move a monitoring station within a period of 18 months following plan submittal	58.10 (b)(5)	Yes	Yes	
28.	Scale of representativeness for each monitor as defined in Appendix D	58.10(b)(6); App D	Yes, p.10-26	Yes	
29.	Identification of sites suitable and sites not suitable for comparison to the annual PM2.5 NAAQS as described in Part 58.30	58.10 (b)(7)	N/A	N/A- No PM <sub>2.5</sub> monitors identified.	
30.	MSA, CBSA, CSA or other area represented by the monitor	58.10 (b)(8)	Yes, 10-26	Yes	-For Elko and Fallon, please clarify that MSA stands for Micropolitan Statistical Area (p.10 & 12) -For Harvey's Casino and Resort, please modify "rural MSA" to read "Gardnerville Ranchos Micropolitan Statistical Area"(p.14) -Fernley should be Reno-Sparks-Fernley CSA and Fernley Micropolitan Statistical Area (p.16) -For the Carson City site, please clarify the MSA stands for Metropolitan Statistical Area (p.18) -For Pahrump sites, please clarify that Pahrump is a Micropolitan Statistical Area and that Las Vegas-Paradise-Pahrump is a CSA (p.20-26)
31.	Designation of any Pb monitors as either source-oriented or non-source-oriented	58.10 (b)(9)	N/A	N/A- no current requirement	
32.	Any source-oriented Pb site for which a waiver has been granted by EPA RA	58.10 (b)(10)	N/A	N/A- no current requirement	
33.	Any Pb monitor for which a waiver has been requested or granted by EPA RA for us of Pb-PM10 in lieu of Pb-TSP	58.10 (b)(11)	N/A	N/A- no current requirement	
34.	Identification of required NO2 monitors as either near-road or area-wide	58.10 (b)(12)	N/A		
35.	Document how states and local agencies provide for	58.10 (c)	N/A	N/A- No PM <sub>2.5</sub>	

	<b>ANP requirement</b>	<b>Citation within 40 CFR 58</b>	<b>Was the info submitted?<sup>1</sup> If yes, page #s. Flag if incorrect<sup>2</sup>?</b>	<b>Does the information provided<sup>3</sup> meet the req?<sup>4</sup></b>	<b>Notes</b>
	the review of changes to a PM2.5 monitoring network that impact the location of a violating PM2.5 monitor. <sup>6</sup>			monitors identified.	
36.	Plan to modify the network that complies with findings of the 5-year network assessment. [Note: recommended to be submitted on year of network assessment or year after.]	58.10 (e) 58.14 (a)	N/A- Only applies to year of or after 5-year network assessment		
37.	Precision/Accuracy reports submitted to AQS	58.16(a); App A, 1.3 and 5.1.1	Yes, p.3	Yes	NDEP states that they intend to submit this information for the 2011 data year by May 1, 2012.
38.	Annual data certification submitted	58.15 App. A 1.3	Yes, p.3	Yes	
39.	Frequency of flow rate verification for manual PM samplers audit	App A 3.3.2	N/A	N/A- No PM <sub>2.5</sub> monitors identified.	All PM10 monitoring done with continuous instruments.
40.	Frequency of flow rate verification for automated PM analyzers audit	App A 3.2.3	Yes, p.10, 20, 22, 24, 26	Yes	
41.	Frequency of one-point flow rate verification for Pb samplers audit	App A 3.3.4.1	N/A		
42.	Frequency of one-point QC check (gaseous)	App. A 3.2.1	Yes, p.12, 14, 16, 18.	Yes	EPA found all gaseous sites are listed as having semi-monthly one-point QC checks. Checks are required at least once every two weeks unless agencies have been approved for an alternative schedule. Upon further follow-up with NDEP, the agency has clarified that these checks do occur at least once every two weeks.  Please adjust next's year's plan to report the accurate schedule.
43.	Date of last Annual Performance Evaluation (gaseous)	App. A 3.2.2	Yes, p.12, 14, 16, 18	Yes	
44.	Dates of last two semi-annual flow rate audits for PM monitors	App A, 3.2.4 and 3.3.3	Yes, p.10, 20, 22, 24, 26	Yes	
45.	Dates of last two semi-annual flow rate audits for Pb	App A	N/A	N/A- no current	

<sup>6</sup> The affected state or local agency must document the process for obtaining public comment and include any comments received through the public notification process within their submitted plan.

	ANP requirement	Citation within 40 CFR 58	Was the info submitted? <sup>1</sup> If yes, page #s. Flag if incorrect <sup>2</sup> ?	Does the information provided <sup>3</sup> meet the req? <sup>4</sup>	Notes
	monitors	3.3.4.1		requirement	
46.	PM2.5 co-location	App A 3.2.5	N/A	N/A- No PM <sub>2.5</sub> monitors identified.	
47.	Distance between co-located monitors	App. A 3.2.5.6	N/A	N/A- No collocated monitors identified.	
48.	Manual PM10 method co-location met? (note: continuous PM10 does not have this requirement)	App A 3.3.1	N/A	N/A- no current requirement	NDEP currently operates all continuous instruments
49.	Pb co-location	App A 3.3.4.3	N/A	N/A- no current requirement	
50.	PM10-2.5 co-location (note: only applies to Fresno and Phoenix NCore sites)	App A 3.3.6	N/A	N/A- no current requirement	
51.	Required # of PM2.5 PEP audits	App A 3.2.7	N/A	Yes - EPA requirement <sup>7</sup>	
52.	Required # of Pb PEP audits	App A 3.3.4.4	N/A	Yes - EPA requirement <sup>8</sup>	
53.	Required # of NPAP audits (or approved equivalent)	App A 2.4		Yes - EPA requirement <sup>9</sup>	
54.	Instrument/monitoring method code for each monitor: is it reported properly? Is it reported correctly (i.e., appropriate method code for regulatory monitors)?	App C 2.4.1.2	Yes, p.10-26	Yes	Method codes lists for FEM & FRM instruments are published on EPA AMTIC website available at: <a href="http://www.epa.gov/ttnamti1/files/ambient/criteria/reference-equivalent-methods-list.pdf">http://www.epa.gov/ttnamti1/files/ambient/criteria/reference-equivalent-methods-list.pdf</a>
55.	Placeholder for: Optional request to have PM2.5 continuous instruments treated as non-FEMs and therefore not comparable to NAAQS?	Proposed rule and memo			
56.	Start date for each monitor	Required to determine if other req. (e.g., min # and co-lo) are met	Yes, p.10-22	Yes	
57.	Instrument monitor type for each monitor	Required to	Yes, p.4	Yes	

<sup>7</sup> EPA has reviewed EPA documentation to confirm that these requirements have been met for the area in question.

<sup>8</sup> EPA has reviewed EPA documentation to confirm that these requirements have been met for the area in question.

<sup>9</sup> EPA has reviewed EPA documentation to confirm that these requirements have been met for the area in question.

	ANP requirement	Citation within 40 CFR 58	Was the info submitted? <sup>1</sup> If yes, page #s. Flag if incorrect <sup>2</sup> ?	Does the information provided <sup>3</sup> meet the req? <sup>4</sup>	Notes
		determine if other req. (e.g., min # and co-lo) are met			
58.	Monitoring objective for each instrument	App D 1.1 58.10 (b)(6)	Incorrect, p.10-26	Insufficient to judge.	The current "Monitor Objective" rows should be changed to "Site Type." Monitor Objective refers to one or more of three basic monitoring objectives: (1) provide air pollution data to the general public in a timely manner, (2) support compliance with ambient air quality standards and emissions strategy development, and (3) support air pollution research studies. See attachment D of the 2012 Annual Monitoring Network Plan memo sent by EPA R9 for further guidance. Please add correct monitor objective for each monitor in next year's plan.
59.	Site type for each instrument	App D 1.1.1	Yes, p.10-26	Yes	-Information was submitted as "Monitor Objective." Please change row name to "Site Type." -Church site on p.20 should be changed to "Source Oriented" site type if the purpose of the monitor is targeted to capture the dry lake bed source described in the plan. -See related check#58 above.
60.	Instrument parameter code for each instrument	Required to determine if other req. (e.g., min # and co-lo) are met	Yes, p.10-26	Yes	Recommend modifying "Pollutant" row name to read "Pollutant/Parameter Code" in order to clarify that the Parameter code is also being reported.
61.	Instrument parameter occurrence code for each instrument	Required to determine if other req. (e.g., min # and co-lo) are met	N/A	N/A- NDEP operates one parameter at each site.	EPA recommends the reporting of Parameter Occurrence Code (POC) as separate line in the detailed site information tables. This will be especially useful for any collocations that may be established in the future.

	ANP requirement	Citation within 40 CFR 58	Was the info submitted? <sup>1</sup> If yes, page #s. Flag if incorrect <sup>2</sup> ?	Does the information provided <sup>3</sup> meet the req? <sup>4</sup>	Notes
					See Attachment C of the 2012 Annual Monitoring Network Plan memo sent by EPA R9 for suggested format to report POC.
62.	Sampling season for ozone (note: date of waiver approval must be included if the sampling season deviates from requirement)	App D, 4.1(i)	Yes, p.12, 16, 18, 28	Yes	"Operation Schedule" row should be adjusted to "continuous" for current ozone monitors. "Sampling Season" row should be adjusted to "April 1 – October 31" for current ozone monitors at Carson City, Fernley, and Fallon.
63.	Sampling schedule for PM2.5 - applies to year-round and seasonal sampling schedules (note: date of waiver approval must be included if the sampling season deviates from requirement)	58.12(d) App D 4.7	N/A	N/A- No PM <sub>2.5</sub> monitors identified.	
64.	Sampling schedule for PM10	58.12(e) App D 4.6	Yes, p.10, 20, 22, 24, 26	Yes	
65.	Sampling schedule for Pb	58.12(b) App D 4.5	N/A	N/A- no current requirement	
66.	Sampling schedule for PM10-2.5	58.12(f) App D 4.8	N/A	N/A- no current requirement	
67.	Minimum # of monitors for O3 [Note: should be supported by MSA ID, MSA population, DV, # monitors, and # required monitors]	App D, 4.1(a) and Table D-2	Yes, p.5	Yes	
68.	Identification of max. conc. O3 monitor(s)	App D 4.1 (b)	Yes, p.5	Yes	Ozone design values are reported for each of the sites in NDEP's network, however a site capturing maximum ozone concentration for the Carson City MSA is not currently specified. Please label the site with the highest design value as the maximum concentration in next year's plan. For this year's plan for example, that site would be the Carson City 5 <sup>th</sup> Street site.
69.	Minimum monitoring requirements met for near-road NO2	App D 4.3.2	N/A		
70.	Minimum monitoring requirements met for area-wide NO2	App D 4.3.3	N/A		
71.	Minimum monitoring requirements met for RA-40 NO2	App D 4.3.4	N/A		
72.	Minimum monitoring requirements met for SO2	App D 4.4	N/A	N/A- no current	

	ANP requirement	Citation within 40 CFR 58	Was the info submitted? <sup>1</sup> If yes, page #s. Flag if incorrect <sup>2</sup> ?	Does the information provided <sup>3</sup> meet the req? <sup>4</sup>	Notes
				requirement	
73.	Minimum monitoring requirements met for CO	App D 4.2	N/A		
74.	Minimum monitoring requirements met for Pb	App D 4.5 58.13(a)	N/A	N/A- no current requirement	
75.	Minimum # of monitors for PM2.5 [Note: should be supported by MSA ID, MSA population, DV, # monitors, and # required monitors]	App D, 4.7.1(a) and Table D-5	No	Insufficient to judge	-PM2.5 minimum monitoring requirements are not specified. The Carson City Metropolitan Statistical Area is above the 50,000 population threshold and may require a SLAMS site. Please specify PM2.5 minimum monitoring requirements and include supporting information in next year's plan. -Please also include detailed site information for any SPM PM2.5 monitoring.
76.	Required PM2.5 sites represent community-wide air quality at neighborhood or urban scale	App D 4.7.1(b)	N/A	N/A- No PM <sub>2.5</sub> monitors identified.	
77.	For PM2.5, is at least one site in a population-oriented area of expected maximum concentration	App D 4.7.1(b)(1)	N/A	N/A- No PM <sub>2.5</sub> monitors identified.	
78.	If >1 SLAMS PM2.5 required, is there a site in an area of poor air quality	App D 4.7.1(b)(2)	N/A	N/A- No PM <sub>2.5</sub> monitors identified.	
79.	Minimum monitoring requirements for continuous PM2.5	App D 4.7.2	N/A	N/A- No PM <sub>2.5</sub> monitors identified.	
80.	Requirements for PM2.5 background and transport sites	App D 4.7.3	No	Insufficient to judge	-This requirement may be met by sites operated by other agencies in Nevada or outside of the state if comparable. Please clarify how this requirement is being met in next year's plan.
81.	Are PM2.5 Chemical Speciation requirements met for official STN sites?	App D 4.7.4	N/A	N/A- no current requirement	
82.	Spatial Averaging for comparison to Annual NAAQS: are intended CMZs defined and met criteria in 40 CFR 50 App N?	App D 4.7.5	N/A		
83.	Minimum # of monitors for PM10	App D, 4.6 (a) and Table D-4	Yes, p.5	Yes	
84.	Minimum monitoring requirements met for PM10-2.5 mass	App D 4.8	N/A	N/A- no current requirement	
85.	Distance of site from nearest road	App E 6	Yes, p.10-26	Yes	
86.	Traffic count of nearest road	App E	Yes, p.10-26	Yes	

	ANP requirement	Citation within 40 CFR 58	Was the info submitted? <sup>1</sup> If yes, page #s. Flag if incorrect <sup>2</sup> ?	Does the information provided <sup>3</sup> meet the req? <sup>4</sup>	Notes
87.	Groundcover	App E 3(a)	Yes, p.10-26	Yes	
88.	Probe height	App E 2	Yes, p.10-26	Yes	
89.	Distance from supporting structure	App E 2	Yes, p.10-26	Yes	
90.	Distance from obstructions on roof	App E 4(b)	Yes, p.10-26	Yes	For future obstructions that may exist, please include distance and height of obstruction.
91.	Distance from obstructions not on roof	App E 4(a)	No	Insufficient to judge	Please include in next year's network plan information on any potential obstructions not on roof. Please ensure that distance and height for any potential obstruction is specified.
92.	Distance from trees	App E 5	Yes, p.10-26	No for CO monitor at Harvey's.  Yes- all others	90% of the monitoring path must be at least 10 meters or further from the drip line of trees. The trees at Harvey's are only 4 meters away.  Per 40 CFR 58, App.E 5(c) please clarify whether any trees or shrubs are located between the probe and the roadway.
93.	Distance to furnace or incinerator flue	App E 3(b)	Yes, p.10-26	Yes	
94.	Unrestricted airflow	App E, 4(a) and 4(b)	Yes, p.10-26	Yes	
95.	Probe material (if applicable)	App E 9	Yes, p.10-26	Yes	
96.	Residence time (if applicable)	App E 9	Yes, p.10-26	Yes	

### Public Comments on Annual Network Plan

Were comments submitted to the S/L/T agency during the public comment period?

**Yes. John Mosley, Environmental Director, Pyramid Lake Paiute Tribe**

Were any of the comments substantive?

**No, with respect to the annual network plan, however EPA believes Pyramid Lake raises a good suggestion to NDEP with their #3 listed comment. In NDEP's evaluation of their PM2.5 monitoring network, as part of the next 5-year network assessment, it would be a good idea to examine concentrations from nearby monitoring.**

**Attachment B: Annual Air Monitoring Network Plan Items where EPA is Not Taking Action**

We are not acting on the portions of annual network plans where either EPA Region 9 lacks the authority to approve specific items of the plan, or EPA has determined that a requirement is either not met or information in the plan is insufficient to judge whether the requirement has been met.

- System modifications (e.g., site closures or moves) are subject to approval per 40 CFR 58.14(c). Information provided in the plan was insufficient for EPA to approve the following system modification listed in the plan per the applicable requirement: discontinuation of the Stateline CO monitor (page 5-6). Therefore, we are not taking action on this item as part of this year’s annual network plan.
- EPA identified items in you agency’s annual network plan where a requirement was not being met or information in the plan was insufficient to judge whether the requirement was being met based on 40 CFR 58.10 and the associated appendices. Therefore, we are not acting on of the following items:

Item	Checklist Row (Attachment A)	Issue
Minimum # of monitors for PM2.5	75	Insufficient information to judge
Requirements for PM2.5 background and transport sites	80	Insufficient information to judge
Monitoring objective for each instrument	58	Insufficient information to judge
Distance from obstructions not on roof	91	Insufficient information to judge
Distance from trees	92	Not meeting requirement in one instance

Additional information for each of these items is included in Attachment A.

## Attachment C: Additional Detailed Comments

- [Item 24] A numbered street address was not specified for the Harvey's monitor. EPA suggests providing the address of the building the monitor resides on top of.
- [Item 25] Please correct the typo for the sampling and analysis method reported for the CO monitor at Harvey's (p.14) in order to clarify that the instrument is of FRM or FEM designation.
- [Item 30] Please clarify when MSA stands for Micropolitan Statistical Area versus Metropolitan Statistical Area. Please also include relevant CSA when appropriate.
- [Item 42] Please adjust next year's one-point gaseous instrument QC checks to reflect the accurate schedule that should be listed as at least once every two weeks. Currently, the schedule is reported as semi-monthly.
- [Item 59] Although information describing site type is provided in the plan, this is mislabeled as "Monitor Objective." Please re-label these rows in next year's plan to read Site Type. For further guidance on the monitoring objective versus site type, please refer to Attachment D of the Annual Network Plan Memo sent by EPA Region 9 in May 2012.
- [Item 60] In order to clarify that both the pollutant and parameter code are reported in the detailed site tables (p.10-26), EPA recommends that the rows labeled "Pollutant" get re-labeled to read "Pollutant/Parameter code." A separate row to report only the parameter code may also be an option.
- [Item 61] It is suggested that the parameter occurrence code for each instrument at each monitoring site is specified in next year's plan.
- [Item 62] The rows labeled as "Operation Schedule" for the ozone monitoring sites should be adjusted from "seasonal" to read "continuous." The rows labeled "Sampling Season" should specify the days of the sampling season (i.e. April 1<sup>st</sup> – October 31<sup>st</sup>).
- [Item 68] NDEP's plan reports ozone design values for each of their SLAMS ozone sites in operation (see page 5). Based on the design values reported, the Carson City 5<sup>th</sup> Street site should be labeled as the maximum concentration site in the network. Please ensure future plans specify the maximum concentration site for ozone. This maximum/highest concentration designation should be reported as the Site Type.
- [Items 90 & 91] For future plans, as necessary, report any obstructions (on and off the roof) by providing a distance from the probe/inlet, as well as height of the obstruction.
- [General] EPA recommends that NDEP report detailed information for meteorology tower parameters operated by the agency and incorporate the details into the site tables found on pages 10-26. Examples of helpful detailed site information to provide include:

instrument manufacturer and model, start date, siting, and QA/QC information, as applicable.

## **APPENDIX C**

### **Interstate Transport Analysis for the 2010 Sulfur Dioxide Primary National Ambient Air Quality Standard**

**PUBLIC COMMENT DRAFT**

**APRIL 19, 2013**

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DRAFT

## APPENDIX C

### Interstate Transport Analysis for the 2010 Sulfur Dioxide Primary National Ambient Air Quality Standard

#### C.1 INTRODUCTION

Section 110(a)(2)(D)(i)(I) of the Clean Air Act (CAA) requires each state to prohibit emissions that contribute significantly to nonattainment in, or interfere with maintenance by, any other state with respect to any primary or secondary national ambient air quality standard (NAAQS). The Nevada Division of Environmental Protection (NDEP) evaluated the impact of transport of sulfur dioxide (SO<sub>2</sub>) emissions from Nevada sources to sensitive receptor areas in nearby states, other western states and eastern states. The NDEP used the U.S. Environmental Protection Agency (USEPA) map of preliminary nonattainment areas for the 2012 SO<sub>2</sub> NAAQS (<http://www.epa.gov/airquality/sulfurdioxide/designations/prelimmap.html>) and the US EPA 2011 Design Value Report for Sulfur Dioxide (<http://www.epa.gov/airtrends/values.html>) to identify receptor areas, i.e., air quality planning areas that are nonattainment or maintenance for the 2010 or previous SO<sub>2</sub> NAAQS or areas that have monitored values approaching the NAAQS.

In evaluating the possible impact of SO<sub>2</sub> transport from Nevada sources, the NDEP reviewed other states' state implementation plan (SIP) submittals, 2010 SO<sub>2</sub> NAAQS designation requests and responses and associated technical support documents, wind rose plots, 2008 National Emissions Inventory (NEI) data, and Clean Air Status and Trends Network (CASTNET, <http://epa.gov/castnet/javaweb/index.html>) monitoring data. CASTNET sites are located in areas where urban influences are minimal; they are considered representative of regional background SO<sub>2</sub> levels. The NDEP reviewed five years (2007-2012) of CASTNET data collected at six national parks and one national monument: Nevada (Great Basin National Park), Utah (Canyonlands National Park), Montana (Glacier National Park), Colorado (Mesa Verde National Park), and Arizona (Grand Canyon National Park, Petrified Forest National Park, Chiricahua National Monument) (<http://java.epa.gov/castnet/clearsession.do>). The SO<sub>2</sub> data for each of the seven CASTNET monitoring sites examined show low background SO<sub>2</sub> levels throughout the year. Both average weekly and seasonal SO<sub>2</sub> concentrations from the CASTNET sites were low, below 2 ppb, indicating that the regional SO<sub>2</sub> background concentrations are relatively low, which in turn implies that the bulk of the SO<sub>2</sub> in the urban receptor areas is locally generated and not a regional or transport phenomenon.

#### C.2 TRANSPORT TO NONATTAINMENT RECEPTORS IN NEARBY STATES

The NDEP identified nonattainment receptors in two adjacent states: Arizona and Utah.

##### C.2.1 Arizona

The nearest nonattainment receptors to Nevada are the Hayden and Miami SO<sub>2</sub> planning areas located in portions of Gila and Pinal Counties, Arizona. USEPA indicated in its February 6, 2013 120-day letter to the Governor of Arizona that it intends to designate Hayden and Miami

nonattainment for the 2010 SO<sub>2</sub> standard, in accordance with the Governor's recommendation. In the 2002 *Hayden SO<sub>2</sub> Nonattainment Area State Implementation and Maintenance Plan* Arizona states, "Emissions inventories from all sources in the Hayden nonattainment area indicate that although there are other sources of SO<sub>2</sub> emissions, the ASARCO smelter is the primary source for SO<sub>2</sub> emissions and comprises more than 99 percent of total SO<sub>2</sub> emissions in the area." (<http://www.azdeq.gov/environ/air/plan/download/haydensip.pdf>, p.27). Similarly, the 2002 *Miami SO<sub>2</sub> Nonattainment Area State Implementation and Maintenance Plan* notes, "Emissions inventories from all sources in the Miami nonattainment area indicate that although there are other sources of SO<sub>2</sub> emissions, the Miami smelter is the primary source for SO<sub>2</sub> emissions and comprises more than 99 percent of total SO<sub>2</sub> emissions in the area." (<http://www.azdeq.gov/environ/air/plan/download/miamisip.pdf>, p.25). The emissions inventories for Hayden and Miami support the position that the elevated SO<sub>2</sub> levels in Hayden and Miami are predominantly caused by local emission sources and not transport.

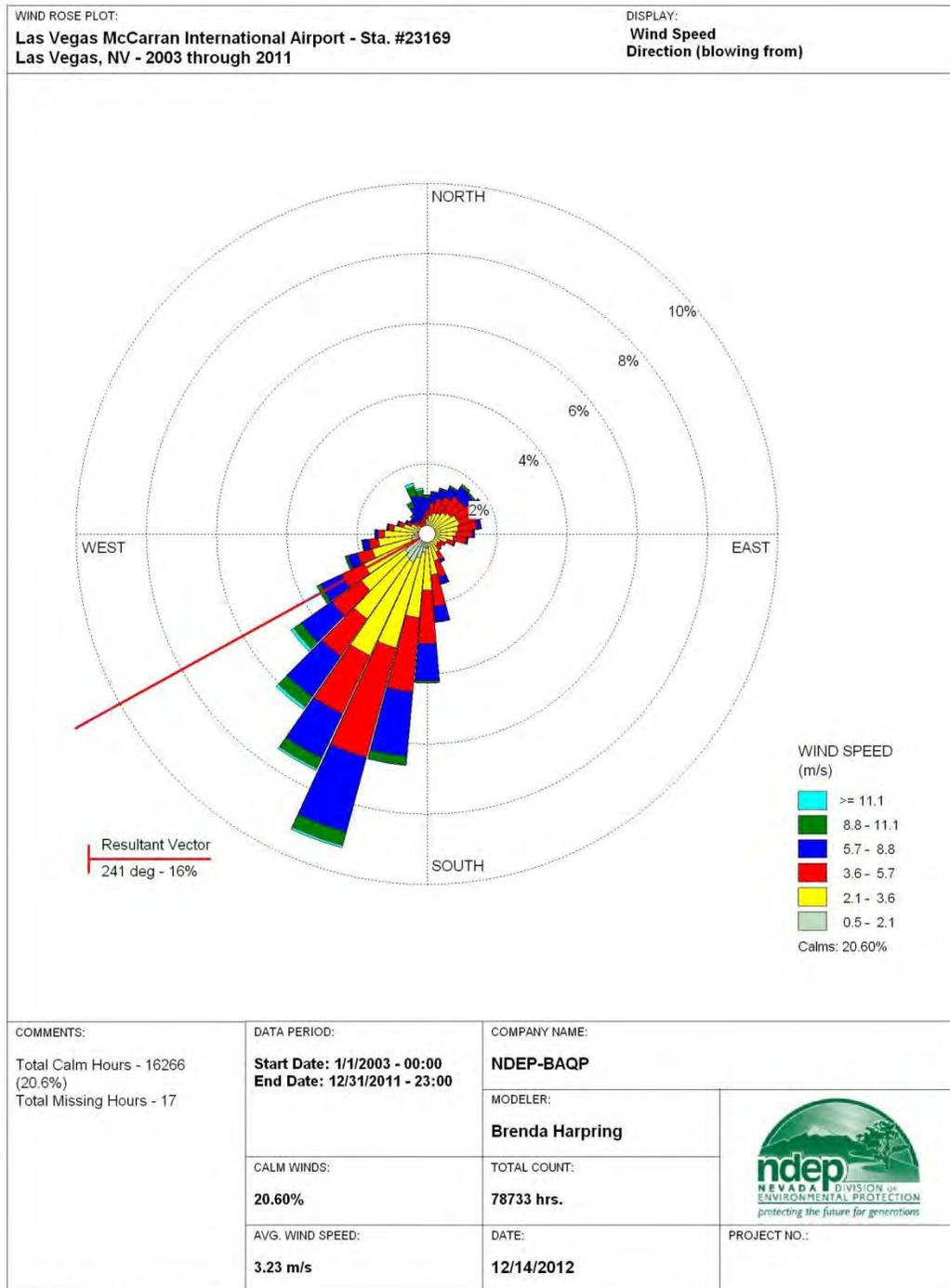
The Hayden SO<sub>2</sub> planning area is situated in part of Gila and Pinal Counties, while the Miami SO<sub>2</sub> planning area is located within Gila County. These air quality planning areas are less than 50 kilometers apart. USEPA's 2008 National Emission Inventory shows emissions from the Gila and Pinal Counties total 29,470 tons (<http://www.epa.gov/air/emissions/index.htm>). The closest SO<sub>2</sub> source in Nevada to the Hayden/Miami area is the Reid Gardner Generating Station (RGGS) in Las Vegas. RGGS is approximately 330 miles from Hayden and 305 miles away from Miami and emitted 940.69 tons of SO<sub>2</sub> in 2008 or about three percent of the emissions from the receptor areas.

Meteorological data at the McCarran International Airport in Las Vegas for 2003 through 2011 indicate that the prevailing winds in Las Vegas are from the south-southwest (Figure C.1). We can assume that winds leaving the Las Vegas area would blow mainly north-northeast, and not toward the Hayden/Miami area, which lies southeast of Las Vegas. Wind data from the Phoenix Sky Harbor International Airport for 2003 through 2011 show that the prevailing winds in Phoenix come mainly from the east and to a lesser degree from the west (Figure C.2). Thus, it is reasonable to conclude that locations southeast of the Phoenix area such as Hayden and Miami are not significantly influenced by winds from Nevada.

With respect to Arizona, the NDEP finds that emissions from Nevada do not significantly contribute to nonattainment of the 2010 SO<sub>2</sub> NAAQS, based on the following evidence: (1) technical information indicating that elevated SO<sub>2</sub> levels in Hayden/Miami were predominantly cause by local emission sources, (2) insignificant SO<sub>2</sub> emissions from RGGS compared to local sources, (3) CASTNET data indicating that regional background levels of SO<sub>2</sub> are generally low, and (4) meteorological data showing that the prevailing winds do not blow from Nevada toward the Hayden and Miami receptors.

**FIGURE C.1**

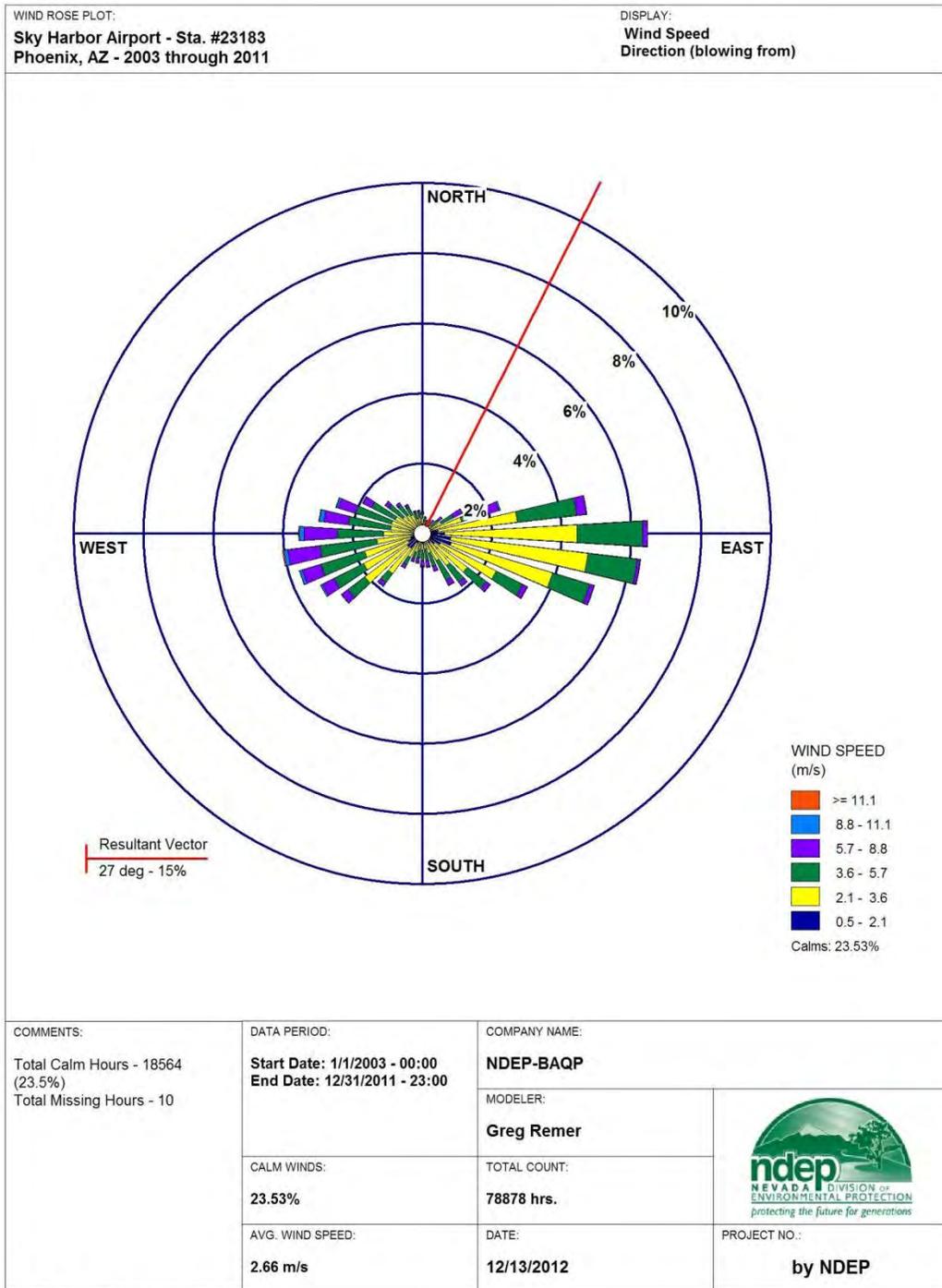
LAS VEGAS, NEVADA WIND ROSE PLOT, 2003-2011



WRPLOT View - Lakes Environmental Software

**FIGURE C.2**

**PHOENIX, ARIZONA WIND ROSE PLOT, 2003-2011**



WRPLOT View - Lakes Environmental Software

### **C.2.1 Utah**

Although Salt Lake County and Tooele County, Utah are still designated nonattainment for the 24-hour and annual 1971 SO<sub>2</sub> standard, there have been no recorded violations of the SO<sub>2</sub> NAAQS since 1981 (<http://www.airquality.utah.gov/Planning/SIP/SIPPDF/Secixb6.pdf>). Utah's October 25, 2011 letter to USEPA with area designation recommendations for the 2010 SO<sub>2</sub> NAAQS confirms Utah's long history of clean data: "Because Salt Lake County remains a nonattainment area for the initial 1971 SO<sub>2</sub> NAAQS, Utah has a long-standing and robust SO<sub>2</sub> monitoring network in Salt Lake County, extending into neighboring Davis County. For the past 29 years, at none of those monitoring stations has the ambient SO<sub>2</sub> concentration ever violated either the initial or revised standard." ([http://www.epa.gov/so2designations/recletters/R8\\_UT\\_rev\\_rec.pdf](http://www.epa.gov/so2designations/recletters/R8_UT_rev_rec.pdf)). EPA's 120-day letter to Utah regarding responding to the Governor's letter confirms continued clean data throughout Utah through 2011 ([http://www.epa.gov/so2designations/eparesp/08\\_UT\\_resp.pdf](http://www.epa.gov/so2designations/eparesp/08_UT_resp.pdf)). The NDEP concludes that no areas in Utah are in danger of exceeding the 2010 SO<sub>2</sub> NAAQS.

The NDEP concludes that emissions from Nevada do not significantly contribute to nonattainment of the 2010 SO<sub>2</sub> NAAQS in Utah, based on the following evidence: (1) monitoring data indicating that elevated SO<sub>2</sub> levels in the Salt Lake-Tooele Counties nonattainment area ceased decades ago, and (2) CASTNET data demonstrating that regional background levels of SO<sub>2</sub> are even lower than the low SO<sub>2</sub> levels at identified receptors.

## **C.3 TRANSPORT TO NONATTAINMENT RECEPTORS IN WESTERN STATES**

The NDEP identified two nonattainment receptors in one distant western state: Montana.

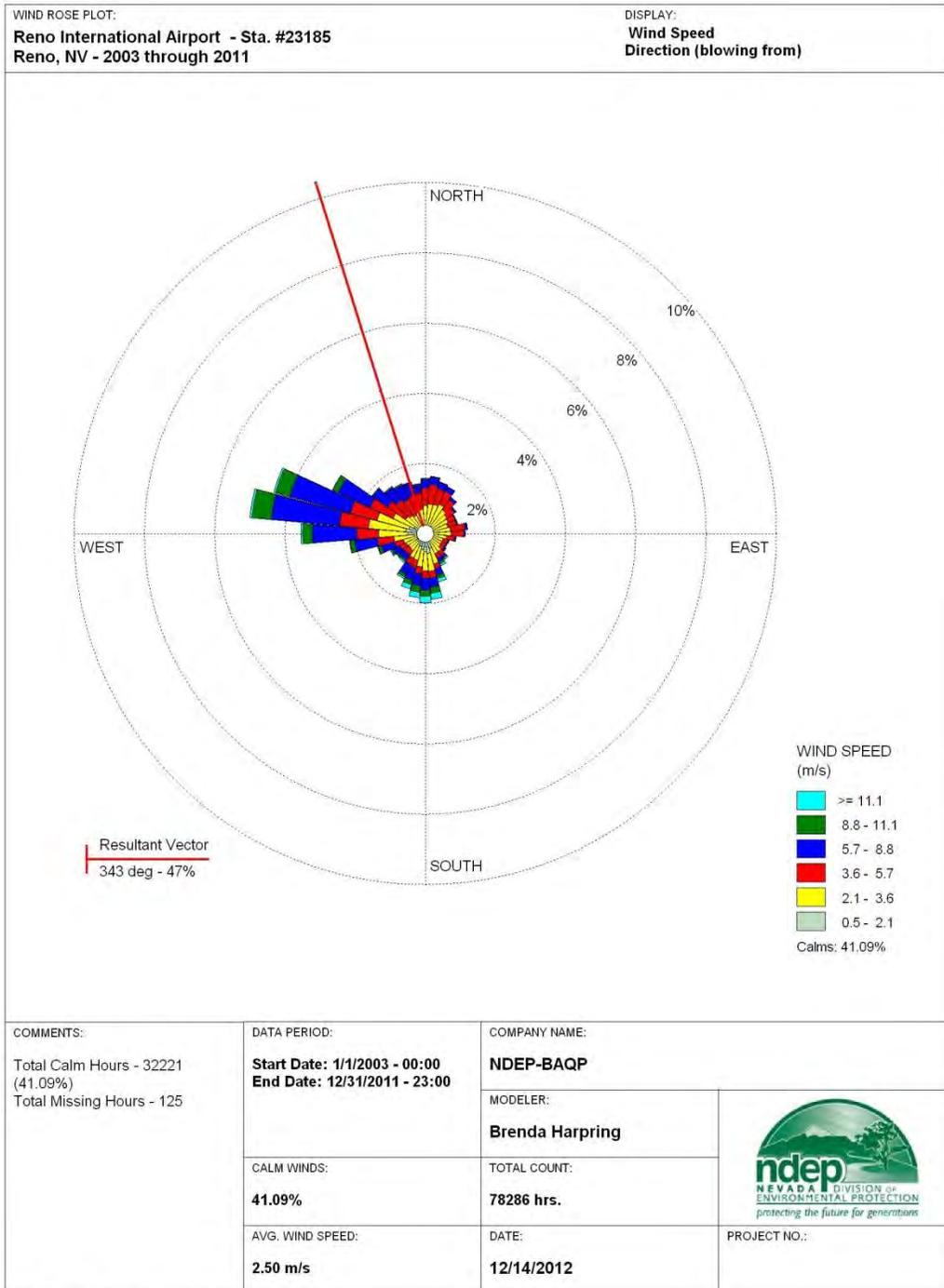
### **C.3.1 Billings and Laurel Area, Montana**

In its February 6, 2013 120-day letter, the USEPA notified the Governor of Montana of its intent to designate Yellowstone County nonattainment for the 2010 SO<sub>2</sub> NAAQS. Within Yellowstone County, all of the facilities that emit SO<sub>2</sub> are located in the Billings and Laurel areas. Billings and Laurel are 15 miles apart. There are seven industrial point sources that are significant emitters of SO<sub>2</sub> in the Billings/Laurel area: three petroleum refineries; a sugar beet processing plant; a coal-fired electrical generating station; a sulfur recovery plant; and a petroleum coke-fired electrical/steam co-generation facility. Total emissions from these seven sources averaged about 8000 tpy during 2008, 2009 and 2010. ([http://www.epa.gov/airquality/sulfurdioxide/designations/recletters/R8\\_MT\\_rec.pdf](http://www.epa.gov/airquality/sulfurdioxide/designations/recletters/R8_MT_rec.pdf))

The closest SO<sub>2</sub> source in Nevada to the Billings/Laurel receptor area is the North Valmy Generating Station, which is jointly owned by NV Energy and Idaho Power. Valmy is over 540 miles from the receptor area. In 2008, Valmy emitted 8130 tons of SO<sub>2</sub>. The NDEP reviewed meteorological data for Reno International Airport from 2003 through 2011 to indicate the prevailing wind direction for potential transport to the Montana nonattainment receptors (Figure C.3). The data indicate that the prevailing winds at Reno are mainly from the west-northwest. We can assume winds leaving the Reno area would blow east or southeast, not toward the Montana SO<sub>2</sub> nonattainment receptors which lie northeast of Reno and Valmy.

**FIGURE C.3**

RENO, NEVADA WIND ROSE PLOT, 2003-2011



WRPLOT View - Lakes Environmental Software

Nevada relies on the following evidence to support a finding that emissions from Nevada do not significantly contribute to nonattainment of the 2010 SO<sub>2</sub> NAAQS at the Billings/Laurel receptor area: (1) the overwhelming contribution of seven significant local emission sources to high SO<sub>2</sub> levels in the Billings/Laurel area, (2) CASTNET data indicating that regional background levels of SO<sub>2</sub> are generally low during the time periods of elevated SO<sub>2</sub> at the receptors, (3) the significant distance from the state of Nevada to the nonattainment receptors in Montana, and (4) the prevailing winds at Nevada emission sources not blowing toward the receptor area.

### **C.3.2 East Helena, Montana**

In 1978, East Helena (in Lewis and Clark County), Montana was designated nonattainment for the 1971 SO<sub>2</sub> standard. In 1995, USEPA approved Montana's SO<sub>2</sub> attainment demonstration SIP for East Helena. The SIP was developed in consultation with the ASARCO primary lead smelter, the only significant source of SO<sub>2</sub> emissions in the East Helena nonattainment area (60 FR 5313, January 27, 1995). The ASARCO smelter shut down in 2001. According to the 2008 NEI, Lewis and Clark County emitted only 28 tons of SO<sub>2</sub> from all source sectors combined in 2008 (<http://www.epa.gov/air/emissions/index.htm>). USEPA has not proposed to designate East Helena nonattainment for the 2010 SO<sub>2</sub> standard.

Nevada's closest significant source to the receptor area is the North Valmy Generation Station, which is approximately 480 miles away. Valmy emitted 8130 tons of SO<sub>2</sub> in 2008. The NDEP reviewed meteorological data for Reno International Airport from 2003 through 2011 as a general indication of the prevailing wind direction for potential transport to the East Helena receptor (Figure C.3). The data indicate that the prevailing winds at Reno are mainly from the west-northwest. We can assume winds leaving the Reno area would blow east or southeast, not toward East Helena, which is northeast of Reno and Valmy.

Nevada relies on the following evidence to support a finding that emissions from Nevada do not significantly contribute to nonattainment or maintenance of the SO<sub>2</sub> NAAQS in East Helena: (1) information indicating that SO<sub>2</sub> levels were predominantly caused by a local emission source that has since been shut down, (2) CASTNET data indicating that regional background levels of SO<sub>2</sub> are even lower than concentrations currently monitored in Helena, Montana, (3) the significant distance from the state of Nevada to the nonattainment receptor in Montana, and (4) the prevailing winds at Nevada emission sources not blowing toward the receptor area.

## **C.4 TRANSPORT TO MAINTENANCE RECEPTORS IN NEARBY STATES**

The NDEP identified maintenance receptors in one adjacent state: Arizona.

### **C.4.1 Arizona**

There are four maintenance areas for the 1971 SO<sub>2</sub> NAAQS in Arizona: the Ajo, Douglas, Morenci, and San Manuel SO<sub>2</sub> planning areas. In 2001-2002, Arizona submitted redesignation requests and maintenance plans for all four areas. The emission inventories in those plans show that nearly all of the SO<sub>2</sub> emissions in those areas came from the various copper smelters located these maintenance areas (<http://www.azdeq.gov/environ/air/plan/>). Only one smelter remains operational and is located in the San Manuel SO<sub>2</sub> planning area. There have been no recorded

monitoring violations of the SO<sub>2</sub> NAAQS in any of these areas since the mid-1980s. Furthermore, USEPA has not proposed to designate San Manuel nonattainment for the 2010 SO<sub>2</sub> standard.

The RGGS in Las Vegas is the closest SO<sub>2</sub> source in Nevada to the receptor areas. RGGS is approximately 300 miles from Arizona's nearest maintenance receptor. Meteorological data at the McCarran International Airport in Las Vegas for 2003 through 2011 indicate that the prevailing winds in Las Vegas are from the south-southwest (Figure C.1). We can assume that winds leaving the Las Vegas area would blow mainly north-northeast, and not toward the maintenance areas, which lie south-southeast of Las Vegas. Meteorological data from the Phoenix Sky Harbor International Airport for 2003 through 2011 show that the prevailing winds in Phoenix come mainly from the east and to a lesser degree from the west (Figure C.2). Thus, it is reasonable to conclude that the maintenance areas southeast of the Phoenix area are not significantly influenced by emissions from Nevada.

Based on the following evidence, the NDEP concludes that emissions from Nevada do not significantly interfere with the maintenance of the SO<sub>2</sub> NAAQS in Ajo, Douglas, Morenci, or San Manuel: (1) technical information indicating that elevated SO<sub>2</sub> levels in the maintenance areas were predominantly caused by local emission sources, (2) CASTNET data indicating that regional background levels of SO<sub>2</sub> are generally low, (3) the significant distance from the state of Nevada to the receptors, and (4) meteorological data showing that the prevailing winds do not blow from Nevada toward the maintenance receptors.

## **C.5 TRANSPORT TO MAINTENANCE RECEPTORS IN WESTERN STATES**

The NDEP identified maintenance receptors in one distant western state: New Mexico.

### **C.5.1 New Mexico**

Grant County, New Mexico was designated nonattainment in 1978 and redesignated attainment in 2003. There have been no monitored violations of the SO<sub>2</sub> NAAQS since 1975. New Mexico attributes past violations to the Hurley smelter located directly outside the town of Hurley ([http://www.nmenv.state.nm.us/aqb/Control\\_Strat/sip/Grant\\_Text.pdf](http://www.nmenv.state.nm.us/aqb/Control_Strat/sip/Grant_Text.pdf)). As a consequence of emission controls placed on the smelter, Grant County had only 18 tons of SO<sub>2</sub> emissions in 2008 (<http://www.epa.gov/air/emissions/index.htm>). USEPA has not proposed to designate Grant County nonattainment for the 2010 SO<sub>2</sub> standard ([http://www.epa.gov/so2designations/eparesp/06\\_NM\\_resp.pdf](http://www.epa.gov/so2designations/eparesp/06_NM_resp.pdf)).

The RGGS in Las Vegas is the closest SO<sub>2</sub> source in Nevada to the Grant County maintenance area, approximately 570 miles away. RGGS emitted 940.69 tons of SO<sub>2</sub> in 2008. Meteorological data at the McCarran International Airport in Las Vegas indicate that the prevailing winds in Las Vegas are from the south-southwest (Figure C.1). We can assume that winds leaving the Las Vegas area would blow mainly north-northeast and not southeasterly toward Grant County.

Absent CASTNET data for New Mexico, the NDEP reviewed five years (2007-2012) of data from four national parks between Nevada and New Mexico to determine SO<sub>2</sub> background in New

Mexico. These sites include the Mesa Verde National Park in Colorado, and the Grand Canyon National Park, Petrified Forest National Park, and Chiricahua National Monument in Arizona. Both average weekly and seasonal SO<sub>2</sub> concentrations from these National Park Service sites were low, below 2 ppb, indicating that the regional SO<sub>2</sub> background concentrations are relatively low, which in turn implies that the bulk of the SO<sub>2</sub> in the urban receptor areas is locally generated and not a regional or transport phenomenon.

Nevada relies on the following evidence to support a finding that emissions from Nevada do not significantly interfere with the maintenance of the 2010 SO<sub>2</sub> NAAQS in Grant County, New Mexico: (1) technical information indicating that elevated SO<sub>2</sub> levels in maintenance area were predominantly caused by the Hurley smelter, (2) the significant distance from the state of Nevada to the receptor area, and (3) representative air quality data indicating that regional background levels of SO<sub>2</sub> are generally low.

## **C.6 TRANSPORT TO NONATTAINMENT/MAINTENANCE RECEPTORS IN EASTERN STATES**

The NDEP also considered potential SO<sub>2</sub> transport from Nevada emission sources to the nearest nonattainment or maintenance receptors located in the eastern, midwestern, and southern states. The nonattainment receptor nearest to Nevada is Jackson County, Missouri. The USEPA has proposed to designate Jackson County, Missouri nonattainment for the 2010 SO<sub>2</sub> NAAQS ([http://www.epa.gov/airquality/sulfurdioxide/designations/eparesp/07\\_MO\\_resp.pdf](http://www.epa.gov/airquality/sulfurdioxide/designations/eparesp/07_MO_resp.pdf)). Jackson County is over 1000 miles away from the border of Nevada.

The NDEP evaluated the relative magnitude of SO<sub>2</sub> emissions in Nevada to SO<sub>2</sub> emissions in Missouri. The 2008 NEI indicates that SO<sub>2</sub> emissions in Nevada are less than 5 percent of the SO<sub>2</sub> emissions in Missouri (<http://www.epa.gov/air/emissions/index.htm>). Specifically, the 2008 NEI shows 16,813 tons of SO<sub>2</sub> from Nevada sources, compared to 415,204 tons of SO<sub>2</sub> from Missouri sources (34,693 tons SO<sub>2</sub> in Jackson County).

The NDEP believes the following factors support a finding that emissions from Nevada do not significantly contribute to nonattainment of the 2010 SO<sub>2</sub> NAAQS at the Jackson County receptor: (1) the relatively small magnitude of the emissions inventory of SO<sub>2</sub> in Nevada compared to Missouri, combined with (2) the relatively long distance of the state of Nevada from the receptor. These factors also support a qualitative conclusion that emissions from Nevada sources do not significantly contribute to nonattainment or interfere with the maintenance of these NAAQS at any of the other receptors farther east.

## **C.7 CONCLUSION**

The preceding analysis indicates that sulfur dioxide nonattainment (current, and impending for the 2010 NAAQS) and maintenance areas in adjacent and nearby states, as well as other western and eastern states are generally the result of documented local emission sources, which in some cases have ceased operation since the time of designation. Furthermore, the receptor areas the NDEP identified for the 2010 SO<sub>2</sub> NAAQS are a considerable distance from Nevada sources. Based on these factors and the above evaluation, the State of Nevada concludes that sulfur dioxide emissions from Nevada do not contribute to nonattainment or interfere with maintenance

of the 2010 SO<sub>2</sub> standard or the previous SO<sub>2</sub> standards in any other state. Nevada commits to continue to review new air quality information as it becomes available to ensure that this negative declaration is still supported by such information.

DRAFT

## **APPENDIX D**

**May 30, 2007 Letter to the US EPA Region 9 Administrator**

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ALLEN BIAGGI  
Director

JIM GIBBONS  
Governor

KAY SCHERER  
Deputy Director

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Division of State Lands  
Division of State Parks  
Division of Water Resources  
Natural Heritage Program  
Wild Horse Program

**STATE OF NEVADA**  
**Department of Conservation and Natural Resources**  
**OFFICE OF THE DIRECTOR**

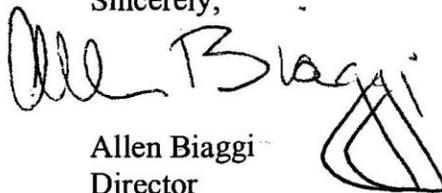
May 30, 2007

Wayne Natri  
Regional Administrator  
ORA-1, USEPA Region 9  
75 Hawthorne Street  
San Francisco CA 94105

Dear Mr. Natri:

Nevada Revised Statutes 445B.205 designates the Department of Conservation and Natural Resources (Department) as the air pollution control agency for the State of Nevada for the purposes of the Clean Air Act insofar as it pertains to State programs. Within the Department, the Division of Environmental Protection has responsibility to manage the air quality planning and air pollution control programs for the State of Nevada. Therefore, pursuant to Nevada Administrative Code 445B.053, I am hereby assigning the Administrator of the Nevada Division of Environmental Protection, or the Deputy Administrator acting on his behalf, to be my official designee for the purposes of the Clean Air Act, including, but not limited to, adoption, revision and submittal of state plans and state implementation plans.

Sincerely,

  
Allen Biaggi  
Director

cc Michael Dayton, Chief of Staff, Office of the Governor  
Jodi Stephens, Deputy Chief of Staff, Office of the Governor  
Leo Drozdoff, Administrator, NDEP  
Colleen Cripps, Deputy Administrator, NDEP  
Tom Porta, Deputy Administrator, NDEP  
Deborah Jordan, Director, EPA Air Division, Region IX  
Jefferson Wehling, ORC, EPA Region IX