

RECLAMATION

Managing Water in the West

Folsom Dam Road Access Restriction Final Environmental Impact Statement



U.S. Department of the Interior
Bureau of Reclamation
Central California Area Office
7794 Folsom Dam Road
Folsom, CA 95630

April 2005

**FINAL ENVIRONMENTAL IMPACT STATEMENT
FOLSOM DAM ROAD ACCESS RESTRICTION
FOLSOM, CALIFORNIA**

Lead Agency:

**U.S. Department of the Interior
Bureau of Reclamation, Central California Area Office
Folsom, California**

Technical Assistance Provided by:

URS Corporation
Fehr & Peers Associates
Public Affairs Management
Northwest Economics Associates
Brown Buntin Associates

This Final Environmental Impact Statement (Final EIS) is prepared in compliance with the National Environmental Policy Act (NEPA) and U.S. Bureau of Reclamation (Reclamation) NEPA procedures. This Final EIS is intended to serve other environmental review and consultation requirements pursuant to 40 Code of Federal Regulations 1502.25(a).

Following a series of independent security reviews, Reclamation indefinitely closed Folsom Dam Road on February 28, 2003, to preserve and protect the core mission of Folsom Dam and Reservoir and to assure the ultimate safety of the public downstream of the facility. The security reviews and subsequent evaluation determined that continued uncontrolled access along Folsom Dam Road presented a security risk to the facility and public. Before its closure, Folsom Dam Road was a well-used route by Folsom residents and commuters from adjoining communities. In response to the road closure and traffic growth, the City of Folsom implemented a traffic “calming program” and specific traffic measures to improve conditions at key intersections while limiting flow through some locations. This EIS discusses these changes and conditions, as well as cumulative impacts that could result from separate reasonably foreseeable actions.

Reclamation completed a Draft EIS and published a Notice of Availability in the *Federal Register* on December 3, 2004. The public comment period on the Draft EIS extended through January 18, 2005. Public comments were received by letter, telephone, and formal statements made at public hearings held in Sacramento, California (January 4, 2005) and Folsom, California (January 5, 2005). Reclamation has considered comments it received in preparing this Final EIS. Comments and responses appear in Appendix E of this Final EIS.

Based on input received during the comment period, the Preferred Alternative identified in the Draft EIS was changed. The Preferred Alternative identified in the Final EIS is Restricted Access Alternative 2. Under that alternative, Folsom Dam Road would be reopened to two-way traffic for 3-hour periods during the morning and evening peak commute times from Monday to Friday, limited to passenger cars, motorcycles, and non-commercial pickups only. Security facilities will be installed on Folsom Dam Road, and all vehicles will be subject to inspection. Reclamation would close the road following completion of the separately planned Folsom Bridge Project. The Final EIS includes editorial and technical changes, factual corrections, and clarifications made in response to public comments.

While this Final EIS describes Reclamation’s Preferred Alternative—Restricted Access Alternative 2 along with the No Action Alternative, Restricted Access Alternative 3, and the Long-Term Closure Alternative, the Council for Environmental Quality implementing regulations for NEPA require a 30-day wait period between publication of the Final EIS and publication of the final decision. The final decision will be documented in a Record of Decision and final rule, which will be published no sooner than 30 days after publication of the Notice of Availability of the Final EIS. The final decision could be the same as this preferred alternative, or it could be a different combination of the alternatives and social and economic mitigation measures.

Inquiries regarding additional information should be directed to: Mr. Robert Schroeder, U.S. Bureau of Reclamation, Central California Area Office, 7794 Folsom Dam Road, Folsom, California, 95630, (916) 989-7274 or email: rschroeder@usbr.gov; Current project information is also available on a project Web site at: http://www.usbr.gov/mp/cca/folsom_road_eis.

The *Folsom Dam Road Access Restriction Final Environmental Impact Statement* (EIS) is a planning document that describes and analyzes human and environmental issues associated with alternatives for long-term vehicular access on Folsom Dam Road. The EIS has been prepared in compliance with the National Environmental Policy Act (NEPA).

This section presents a summary of the EIS. Included in this summary is the purpose and need for the EIS, which identifies the driving forces and scope of the document. This section also provides a synopsis of the four project alternatives analyzed in detail in the EIS, a brief description of the environmental impacts of those alternatives, and a list of potential mitigation measures that may reduce the severity of impacts, where practicable. The Executive Summary has been revised to reflect the change in designation of the Preferred Alternative from the Long-Term Closure of Folsom Dam Road to Restricted Access Alternative 2. The remainder of the Final EIS also includes revisions necessary for the change in the Preferred Alternative designation. In addition, where changes were made to the Final EIS directly in response to comments, those changes are shown in underline (for new text) and ~~strikeout~~ (for deleted text).

PURPOSE AND NEED

When Folsom Dam was built in 1956, a two-lane maintenance road was constructed atop the crest of the dam. This road eventually became known as Folsom Dam Road. The road was designed to provide access to the facility and to the industrial complex that houses the administrative resources necessary to operate and maintain the water delivery and flood protection services of the dam. Prior to the construction of Folsom Dam, the U.S. Army Corps of Engineers (USACE) consulted the California Highway Commission regarding the necessity for a public highway crossing over Folsom Dam. The California Highway Commission did not see a need for a public highway across the dam at the time. Accordingly, no State route has ever been designated, and Folsom Dam Road has never been officially certified nor dedicated for use by the general public.

The U.S. Department of the Interior, Bureau of Reclamation (Reclamation) is responsible for operating and maintaining Folsom Dam and Reservoir in a manner that ensures the benefits envisioned in its authorizing statute. Over the years, Reclamation has had to close Folsom Dam Road intermittently for dam rehabilitation and maintenance work. On February 28, 2003, Reclamation indefinitely closed Folsom Dam Road for security reasons, to preserve and protect the core mission of Folsom Dam and Reservoir and to ensure public safety in the vicinity of the dam and other parts of Sacramento County.

The road closure followed a series of security reviews, including a final review conducted by the Defense Threat Reduction Agency (DTRA) and subsequent full-scale analysis and evaluation of DTRA's recommendations by Reclamation and the Department of the Interior. These documents contain classified information and are not part of this EIS. The evaluation demonstrated that continued uncontrolled access along Folsom Dam Road presented a security risk to the facility and to the public. In response, Reclamation began developing a comprehensive, long-term security plan. A key element of the plan includes, but is not limited to, a long-term solution for the future of vehicular access on Folsom Dam Road. That is the subject of the proposed action and of this EIS.

The **purpose and need** for this action is to:

- Control access to Folsom Dam, including all traffic on Folsom Dam Road
- Minimize the security risks and maximize the safety of Folsom Dam and of the entire Sacramento metropolitan area downstream of the dam

PUBLIC PARTICIPATION PROCESS

The NEPA process requires early and open communication with the public and interested parties, including local governments, to identify environmental issues related to the proposed action. Referred to as scoping, the initial steps of the NEPA process help define the human and environmental impacts that were evaluated and addressed in the environmental review documentation process. The public scoping process included the following actions:

- A Notice of Intent (NOI) to prepare an EIS (Bureau of Reclamation NOI 4310-MN-P) was published on April 5, 2004.
- A Folsom Dam Road Closure EIS Web page was established at <http://www.usbr.gov/mp/cca/roadeis/> with information about the EIS process and an e-mail link to submit written comments to Reclamation.
- Two scoping meetings were conducted in May 2004. These meetings were held to solicit input from the public, interested parties, and agencies on critical environmental issues.

Two hundred and forty-two comments and a petition with 220 signatures were received as of July 2004. These comments were summarized and were considered in the environmental analysis.

Information obtained during the scoping process was used in the analysis to prepare the Public Draft EIS, which was made available for review for a period of 45 days beginning on December 3, 2004. During that period, two public hearings were held to present the findings of this document and to receive public comments. The first hearing was held in Sacramento on January 4, 2005, and the second was held in Folsom on January 5, 2005. After the public comment period ended on January 18, 2005, comments were incorporated into the EIS and this Final EIS was prepared.

SUMMARY DESCRIPTION OF PROPOSED ALTERNATIVES

Four alternatives are analyzed in this EIS: the No Action Alternative, the long-term closure of Folsom Dam Road, and two restricted access alternatives that involve partially opening Folsom Dam Road to public access (Preferred Alternative—Restricted Access Alternative 2 and Restricted Access Alternative 3). The features of the four alternatives analyzed in this document are summarized in Table ES-1. Reclamation has identified potential environmental, economic, and quality-of-life effects of the four alternatives that may occur.

**Table ES-1
Summary Comparison of Alternatives**

	No Action Alternative	Preferred Alternative – Restricted Access Alternative 2	Restricted Alternative 3	Long-Term Closure Alternative
Days Open	7 days/week	Monday–Friday	Monday–Friday	None
Hours Open	24 hours	3-hour peak periods, both AM and PM (e.g. 6–9 AM, 4–7 PM)	2-hour peak periods, both AM and PM (e.g. 6–8 AM, 4–6 PM)	None
Traffic Directional Flow	Two-way	Two-way	One-way	None
Vehicle Restrictions	Passenger cars, motorcycles, trucks under 5.75 tons (11,500 pounds) gross weight only	Passenger cars, motorcycles, and noncommercial pickups only	Passenger cars, motorcycles, and noncommercial pickups only	No public access
Desired Hourly Volume	Not restricted	1,500 vehicles	500 vehicles	None
Consistency With Purpose and Need	This alternative does not meet the purpose and need of the proposed action.	The Preferred Alternative—Restricted Access Alternative 2 controls access, reduces risks, and increases safety compared to the No Action Alternative. This alternative provides an acceptable level of security to allow restricted or controlled access along Folsom Dam Road. It is consistent with the purpose and need.	Restricted Access Alternative 3 controls access, reduces risks, and increases safety compared to the No Action Alternative. This alternative also provides an acceptable level of security to allow restricted or controlled access along Folsom Dam Road. It is consistent with the purpose and need.	The Long-Term Closure Alternative meets the purpose and need of the proposed action.

The Preferred Alternative¹ in this Final EIS is Restricted Access Alternative 2. This is a change from the designation of the Preferred Alternative in the Draft EIS, which was the long-term closure of Folsom Dam Road. Under the Preferred Alternative—Restricted Access Alternative 2, Folsom Dam Road would be reopened to two-way traffic for 3-hour periods during peak commute times in the morning and evening from Monday to Friday. This controlled access across Folsom Dam Road would be permitted until such time that the USACE’s Folsom Bridge Project is implemented (discussed in “Alternatives Considered but Eliminated from Further Consideration” and Sections 3.1 and 3.11.2).

Selection and implementation of a restricted access alternative requires a designated access traffic lane and traffic controls that allow unimpeded access for official purposes into and out of Reclamation’s Folsom Dam Industrial Complex. The City of Folsom has committed to bear all capital, operational, and maintenance costs associated with implementation of any restricted access alternative.

Although a Preferred Alternative has been selected in the Final EIS, it does not foreclose the option of selecting another alternative, or some combination of alternatives, in the Record of Decision (ROD).

No Action Alternative

The No Action Alternative provides the baseline conditions for the environmental analysis, as required by NEPA. The No Action Alternative refers to access conditions that existed prior to the indefinite road closure of February 28, 2003. As such, the No Action Alternative involves reopening Folsom Dam Road to provide access at pre-February 2003 levels. No physical alteration of the road or additional restrictions on traffic flow would be undertaken. Traffic would be allowed on the road 7 days per week, 24 hours per day. Pre-February 2003 security patrols would be reinstated. Periodic, short-term road closures (as occurred before February 2003) would be needed for routine and/or emergency dam maintenance activities and construction of flood control improvements.

As the No Action Alternative neither controls access on Folsom Dam Road nor minimizes the security risks associated with Folsom Dam, Reclamation has determined that it does not meet the purpose and need of the proposed action.

Risk of Dam Failure. As described above, under the No Action Alternative, vehicular access would be restored to pre-February 2003 levels. Security reviews conducted by Reclamation and other independent reviewers indicate that those conditions present a heightened risk of a dam failure. Under this scenario, there would be an increased threat to public safety both in the immediate vicinity of the dam and over a larger area of Sacramento County.

As part of this EIS, Reclamation has completed a review of the magnitude and severity of the risk associated with potential dam failure. Information from that review cannot be publicly disclosed, but knowledge of general types of consequences was used to compare and describe impacts of the No Action Alternative to the other alternatives throughout this document.

¹ The concept of the “preferred alternative” is different from the “environmentally preferable alternative,” although in some cases one alternative may be both. Section 1502.14(e) of the Council on Environmental Quality Regulations requires the EIS to “identify the agency’s preferred alternative if one or more exists, in the draft statement, and identify such alternative in the final statement.”

Analysis and information that was developed for the impact analyses but could not be disclosed can be found in Appendix D. That appendix is occasionally referred to in this EIS but is unavailable for public circulation.

Environmentally Preferable Alternative.² Based on the analysis in the EIS, Reclamation has concluded that the No Action Alternative is the environmentally preferable alternative. No immediate adverse impacts would result from restoring public access to pre-February 2003 levels. However, as noted above, the risk of dam failure would also be greatest under this alternative. Therefore, although the No Action Alternative is the environmentally preferable alternative, it also carries risks that can result in detrimental environmental consequences. Furthermore, the No Action Alternative does not meet the purpose and need for the proposed action.

Action Alternatives

Reclamation has identified a set of conditions that must be met when allowing any public access on Folsom Dam Road, in order to maintain a level of security that is consistent with the purpose and need for the proposed action:

- Vehicles traveling across the dam must be inspected.
- The alternative must allow for periodic closures of Folsom Dam Road so that dam-related operations and maintenance work can occur without difficulty.
- Pre-February 2003 limits on vehicle size and restrictions on pedestrian and bicycle access must be reinstated.
- Emergency access must continue across Folsom Dam Road.
- The risk of liability to Reclamation from accidents and other mishaps that may occur with public use of Folsom Dam Road must be mitigated.
- The City of Folsom has committed to bear all capital, operational, and maintenance costs associated with implementation of any restricted access alternative.
- Selection and implementation of a restricted access alternative requires a designated access traffic lane and traffic controls that allow unimpeded access for official purposes into and out of Reclamation's Folsom Dam Industrial Complex.

In addition to the operational conditions noted above, other conditions may apply depending on the final design specifications.

Preferred Alternative—Restricted Access Alternative 2

The Preferred Alternative is Restricted Access Alternative 2. Under this alternative, public access to Folsom Dam Road would be allowed during 3-hour peak commute periods twice daily, from Monday through Friday. Vehicles would travel in both directions across the road.

² NEPA regulations call for the identification of an environmentally preferable alternative in the Final EIS, based on the analysis of environmental consequences associated with each alternative evaluated.

A security review would be required of every vehicle using the road. While the exact nature and design of the vehicle inspections have not been fully defined, this alternative proposes prescreening through a permitting process coupled with random physical inspections. Conditions required by Reclamation in order to maintain security levels consistent with the purpose and need would apply.

The Preferred Alternative—Restricted Access Alternative 2 provides some degree of control over vehicular access to Folsom Dam Road but may not necessarily include the same level of inspection for each vehicle. It also incorporates inspection facilities, a design feature intended to minimize security risks to Folsom Dam.

Selection and implementation of a restricted access alternative requires a designated access traffic lane and traffic controls that allow unimpeded access for official purposes into and out of Reclamation's Folsom Dam Industrial Complex. The City of Folsom has committed to bear all capital, operational, and maintenance costs associated with implementation of any restricted access alternative.

The Preferred Alternative—Restricted Access Alternative 2 is considered consistent with the purpose and need, and is a reasonable alternative that can be implemented.

Restricted Access Alternative 3

As with the Preferred Alternative—Restricted Access Alternative 2, conditions required by Reclamation to maintain security levels consistent with the purpose and need would apply under Restricted Access Alternative 3.

Under Restricted Access Alternative 3, vehicle access on Folsom Dam Road would be limited to 2-hour peak commute periods from Monday to Friday. While the exact nature and design of the inspections have not been fully defined, this alternative also proposes prescreening through a permitting process coupled with random physical inspections.

The three major differences between the two restricted access alternatives are: (1) the capacity or rate of traffic that will be inspected, (2) the operating hours of Folsom Dam Road, and (3) the directional flow of traffic (Table ES-1). The difference in rate of traffic flow would be based on the number of inspection facilities or method of inspection, which determines how many cars per hour can be inspected and cleared to use the road.

Restricted Access Alternative 3 is also considered consistent with the purpose and need, and is a reasonable alternative that can be implemented.

Long-Term Closure Alternative

The Long-Term Closure Alternative would result in the continued and permanent closure of Folsom Dam Road between Folsom-Auburn Road and East Natoma Street. Under this alternative, no public access to Folsom Dam Road would be allowed. Only authorized Reclamation, law enforcement, and emergency access vehicles would be permitted on Folsom Dam Road for maintenance, security, and emergency reasons.

As the Long-Term Closure Alternative restricts all public vehicular access on Folsom Dam Road and minimizes the security risks to Folsom Dam, it is consistent with the stated purpose and need.

RELATED ACTIONS AND CUMULATIVE IMPACTS

Eight related completed and/or planned actions have been identified that are likely to contribute to cumulative impacts when combined with the effects of the Folsom Dam Road Access Restriction. They include the following:

- Lake Natoma Crossing
- Folsom Historic District Traffic Calming Program
- Folsom Bridge Project
- Folsom Dam Outlet Modification
- Folsom Dam Raise
- Folsom Redundant Water Supply Intake
- Embankment Dams and Dikes Static Modification
- Concrete Dam Seismic and Static Modification

Each of these actions is described in Section 3.11.2. Since they were identified prior to the indefinite closure of Folsom Dam Road in February 2003, it was anticipated that temporary road closures on Folsom Dam Road would be necessary for the latter six actions, which have not been completed. While the duration of the road closures would vary and is not known for all actions identified, all actions would seek to avoid work during peak commute hours. Additional transportation projects in the vicinity may also require road closures on Folsom Dam Road.

It can be assumed that under the No Action Alternative, road closures varying in duration and timing would be necessary to complete the planned actions. These intermittent road closures would lead to impacts similar to those under the Long-Term Closure Alternative, albeit on a temporary basis. Therefore, adverse cumulative effects would occur to traffic and related resources under the No Action Alternative.

Under all action alternatives, necessary closures would be avoided (the road would already be closed, at least partially) and the actions listed above would not create adverse cumulative impacts. Although Folsom Dam Road would be partially open under the Preferred Alternative—Restricted Access Alternative 2 and under Restricted Access Alternative 3, it would not be open during nonpeak and weekend hours, when work-related closures would be necessary.

ALTERNATIVES CONSIDERED BUT ELIMINATED FROM FURTHER CONSIDERATION

Three other alternatives were considered but not advanced for detailed analysis in this EIS. One alternative forwarded to Reclamation by the City of Folsom proposed to open the road to public traffic on a controlled basis with inspection of vehicles (referred to as Scenario 1). Similar to the Preferred Alternative—Restricted Access Alternative 2, Scenario 1 proposed to allow two-way public access for passenger cars, motorcycles, and noncommercial pickup trucks for 3-hour peak commute travel times from Monday through Friday. Unlike the alternatives considered, however, Scenario 1 also called for vehicular access from 9 AM to 5 PM on weekends, with up to 2,000 vehicles traveling on Folsom Dam Road per hour (in both directions) at all times that the road is open. Reclamation considered this alternative but determined that this traffic volume could not reasonably be accommodated under its security inspection conditions. Therefore, Reclamation

has determined that security risks would not be minimized and this alternative would not be consistent with the purpose and need.

Both a temporary and permanent new bridge have been considered in the past, below Folsom Dam and upstream of the Riley Street crossing (Rainbow Bridge). This additional crossing of the American River (now referred to as the Folsom Bridge Project) is currently under evaluation by the USACE. Assuming it is fully funded and approved for construction, the bridge is anticipated to be operational in December 2007. The bridge was considered as an alternative to the Folsom Dam Road Access Restriction but was rejected from further review with regard to this EIS process. By itself, this alternative would not address the immediate and basic purpose and need of controlling access on Folsom Dam Road, which formed the basis of the road closure in 2003. The decision to control access on Folsom Dam Road for security and safety purposes is separate and independent from providing or maintaining traffic capacity and circulation, which is the objective of the Folsom Bridge Project. Even if considered as an alternative, the Folsom Bridge would not be in place sooner than December 2007. For these reasons, the City of Folsom and other local jurisdictions have proposed restricted use of Folsom Dam Road until the bridge is completed, and those restricted access alternatives are considered in this EIS. The Folsom Bridge Project is discussed in greater detail in Sections 3.1 and 3.11.2.

A third alternative was considered based on comments received during the public scoping process. This alternative would allow access for pedestrian and bicycle traffic only on Folsom Dam Road. However, this alternative was found to be infeasible because Reclamation did not allow pedestrians and bicycles on Folsom Dam Road before February 2003, and due to security reasons the road would remain closed to pedestrians and bicyclists under all of the alternatives considered in the EIS.

SUMMARY OF ENVIRONMENTAL IMPACTS AND POTENTIAL MITIGATION

Implementation of the four alternatives analyzed in the EIS would have various impacts. These impacts are identified and discussed in detail (by resource area) in Section 3. The potential effects of the proposed action are summarized in Table ES-2, which appears at the end of this section. In general, the greatest effects from the action alternatives considered relate directly or indirectly to traffic and potential changes in traffic congestion. Other potential effects may occur during construction of inspection facilities under the Preferred Alternative—Restricted Access Alternative 2 and Restricted Access Alternative 3 (Table ES-2). All impacts from action alternatives are compared against the No Action Alternative, the baseline case. Impacts associated with each of the resource areas analyzed are summarized below.

For all resource areas, the risk of potential dam failure is highest under the No Action Alternative and lowest under the Long-Term Closure Alternative. Although dam failure is not an immediate or direct impact of the No Action Alternative, if it occurs, its impacts would supersede effects associated with any of the action alternatives. This assumption is taken into account under all analyses.

Transportation (Traffic)

Before the February 2003 closure of Folsom Dam Road, many roadway segments and intersections in the vicinity experienced levels of service below the standard defined as

acceptable by the City of Folsom's General Plan. Nevertheless, the Preferred Alternative—Restricted Access Alternative 2, Restricted Access Alternative 3, and the Long-Term Closure Alternative would further reduce the level of service in some instances based on modeling results for 2005 (Tables 3.1-5 and 3.1-6). The following roadway segments and intersections would experience reductions in level of service under one or more of the action alternatives when compared to the No Action Alternative:

Roadway Segments

- Folsom-Auburn Road (between Folsom Dam Road and Inwood Road)
- Folsom-Auburn Road (between Oak Avenue Parkway and Greenback Lane)
- Natoma Street (between Folsom Boulevard and Sibley Street)
- East Natoma Street (between Cimmaron Circle and Folsom Dam Road)

Intersections

- Folsom-Auburn Road/Oak Avenue Parkway
- Riley Street/Natoma Street
- Folsom Boulevard/Natoma Street

In addition, comparison of collision data provided by the City of Folsom for periods immediately before and following the road closure indicates that the number of traffic accidents in Folsom increased after the road closure. Although this may be a function of several factors including continued growth, the increase in accidents may also be a result of greater congestion on the roadways listed above. Proposed mitigation is summarized in Table ES-2 and discussed in detail in Section 3.1.3. Potential mitigation measures include various improvements to the intersections listed above, increasing existing and future transit service, and promoting ridesharing.

Air Quality

Under the No Action Alternative, traffic conditions would be restored to pre-February 2003 levels. In that case, at a regional level, criteria pollutant levels for ozone (O₃) and particulate matter 10 micrometers in diameter (PM₁₀) and smaller would not meet Federal or State ambient air quality standards. On the other hand, the regional air basin is in attainment for carbon monoxide (CO). Maximum modeled concentrations indicate that the No Action Alternative would not exceed applicable standards for CO.

Under the Preferred Alternative—Restricted Access Alternative 2, some vehicular traffic would be allowed across Folsom Dam Road, though not at the same capacity as under the No Action Alternative. The total vehicle miles traveled would be slightly higher than under the No Action Alternative. As a result, the Preferred Alternative would result in an increase in total emissions for all pollutants for the years 2003 and 2005. The difference in emissions is less than 1 pound per day across the Folsom regional area for most pollutants. Carbon monoxide shows the greatest difference at 4.7 pounds per day. Modeling of maximum concentration levels shows that CO would not exceed national or State standards. For these reasons, the Preferred Alternative—Restricted Access Alternative 2 is not expected to cause an exceedance or add to an exceedance

of the ambient air quality standards for CO, nitrogen oxides, PM₁₀, or O₃. The Preferred Alternative would have slightly lower total emissions than Restricted Access Alternative 3 or the Long-Term Closure Alternative. However, neither the Preferred Alternative—Restricted Access Alternative 2, Restricted Access Alternative 3, nor the Long-Term Closure Alternative would affect the current status of any of the criteria pollutants with respect to attainment or maintenance of nonattainment classification.

No mitigation is proposed for air quality impacts under the action alternatives because no exceedances of air quality standards would result from their implementation.

Noise

Traffic noise already exceeds local criteria at most of the locations evaluated in the City of Folsom. Under the action alternatives (Preferred Alternative—Restricted Access Alternative 2, Restricted Access Alternative 3, and the Long-Term Closure Alternative), the changes in traffic-generated noise would not be perceptible at most locations. However, total increases in traffic noise would be over 2 decibels³ along one roadway segment, Natoma Street between Folsom Boulevard and Sibley Street, in the study year 2005 under the Long-Term Closure Alternative and in 2013 for all action alternatives.

Potential mitigation for this noise increase was assessed and determined to not be justified. Measures considered included constructing noise barriers (ineffective because of the need to create substantial gaps for driveway access and the agreements needed with all private property owners to implement the measure), acquiring property or interest, using traffic management measures, repaving roads, and insulating and/or air-conditioning public use or nonprofit institutional structures.

Economic and Social Conditions

The No Action Alternative assumes that population and commercial growth would continue at the rate planned by the City of Folsom's land use development models. As a result, economic output and population (which would generate more traffic) projected under the No Action Alternative are higher than under pre-February 2003 conditions.

Following the February 2003 road closure, 177 businesses were surveyed that are located on streets most directly affected by the road closure. These businesses reported experiencing revenue losses of approximately 21 percent. Data were not available to determine to what extent these revenue losses may be offset by increased revenue elsewhere in the city or county. Furthermore, other factors that may have affected revenue losses such as business competition, industry demand, and regional economic conditions were not quantitatively factored into the analysis. The analysis indicates that revenue losses of up to 21 percent may have occurred in the immediate affected area after the February 2003 road closure, but it remains uncertain what portion of these losses can be directly attributed to the closure of Folsom Dam Road.

Compared to the No Action Alternative, under both the Preferred Alternative—Restricted Access Alternative 2 and Restricted Access Alternative 3, there would be revenue losses to businesses directly affected by changing traffic patterns. Because the road would remain closed during

³ This is considered an approximate threshold for perceiving an audible or noticeable change in noise.

nonpeak and weekend hours, access to businesses during those times would continue to be affected. Under the Long-Term Closure Alternative, impacts that have occurred since the February 2003 closure would persist.

Reclamation has no legal obligation to mitigate for potential impacts associated with the full or partial closure of a Reclamation maintenance and facility access road. However, potential mitigation options have been raised or requested. This EIS identifies economic changes or trends that are reported along some of the roads where traffic impacts or changes have occurred after the closure of Folsom Dam Road and shows that these effects vary by location, business sector, and individual business. In cases where a business claims to have suffered direct losses associated with increased vehicular traffic and congestion from the closure of the road in 2003, that effect would have to be individually evaluated based on a review of specific sales revenue and other data, and the effect would have to be disassociated from other cumulative contributing factors such as those mentioned above. The Preferred Alternative—Restricted Access Alternative 2 allows controlled use of Folsom Dam Road, which is predicted to help mitigate traffic conditions and would allow greater access and circulation than under the road closure conditions experienced since February 2003. The action alternatives are under consideration because of an overall security directive, and no compensatory mitigation review program exists or has been authorized by Reclamation for security actions or for the Folsom Dam Road Access Restriction. As a result, even if mitigation were to be assigned to an individual impact, funding for such measures would require additional approvals.

Water Resources and Supply

The No Action Alternative would not result in any direct change in surface water runoff, either in terms of quantity or quality. The Preferred Alternative—Restricted Access Alternative 2 would not directly alter water quality or supply. Minor secondary impacts may result due to the fact that more vehicle miles would be traveled in Folsom and air pollutants may increase in surface water runoff from roads as a result of changes in traffic patterns, particularly during times that Folsom Dam Road is closed. The construction of inspection facilities could also affect the potential for erosion and storm water runoff. Under Restricted Access Alternative 3, effects similar to the Preferred Alternative would result, to a slightly greater degree because of the relative traffic changes. Greater effects to water resources would occur under the Long-Term Closure Alternative as a result of an increase in vehicle miles traveled and associated surface water runoff relative to other alternatives. However, no construction of inspection facilities would be required under the Long-Term Closure Alternative.

Measures to minimize the negative effects to water resources could include limiting construction to the dry season and implementing best management practices for construction waste handling and disposal and for control of sedimentation and erosion for either of the two restricted access alternatives.

Biological Resources

Under the No Action Alternative, no adverse impacts to biological resources would occur. The Preferred Alternative—Restricted Access Alternative 2 and Restricted Access Alternative 3 may have the potential for construction-related impacts, although none is anticipated. Vegetation and habitat types in the area have been previously disturbed, and no special-status species or

wetlands are currently reported or known to occur in the immediate area of Folsom Dam Road. Nevertheless, under either of these alternatives, focused surveys may be conducted for wetland habitat and special-status species with the potential to occur in the area, if necessary, depending on the need for or type of new facilities required for security or inspection.

Construction and design features can be modified to mitigate effects if any are discovered under the Preferred Alternative—Restricted Access Alternative 2 or Restricted Access Alternative 3.

Energy and Power Supply

The No Action Alternative would restore pre-February 2003 conditions, and no effects to energy supply or fuel consumption would occur. None of the action alternatives would impact power supply on a regional basis. However, assuming that vehicle miles traveled in Folsom would increase associated with congestion and diversion, an indirect increase in fuel consumption may result. With the Preferred Alternative—Restricted Access Alternative 2 and Restricted Access Alternative 3, the impact would be greater than the No Action Alternative but less than the Long-Term Closure Alternative. The incremental effect is predicted to be indirect and small under the Long-Term Closure Alternative, which represents the scenario with the greatest increase among all the alternatives.

No mitigation specific to fuel consumption was determined to be necessary.

Recreation

No immediate or direct impacts to recreation would result from reopening Folsom Dam Road under the No Action Alternative. Local recreation users may be inconvenienced under the action alternatives. However, statistical records indicate that, on a regionwide basis, there would be no change to the use of recreational facilities in the area. For recreational users accessing recreational facilities during times that the road is closed (offpeak hours and weekends), it is possible that pressure could increase on existing trails and day use facilities under the both restricted access alternatives, although no data are available to demonstrate such a trend. Recreational users traveling to recreation facilities during peak morning or evening commute hours would see improvements in accessibility. The Long-Term Closure Alternative would affect travel patterns to recreational facilities at all times.

No mitigation is proposed for any of the alternatives. The Long-Term Closure Alternative could inconvenience some users of recreational facilities, although current information does not indicate any overall decline in use. The California Department of Parks and Recreation has recommended contribution to recreational facilities if the Long-Term Closure Alternative is selected, and that recommendation could be considered if the alternative is pursued and statistical records show an adverse change in visitor use or accessibility that supports the recommendation.

Cultural Resources

The No Action Alternative would not have any immediate or direct impact on cultural resources. Under the Preferred Alternative—Restricted Access Alternative 2 and Restricted Access Alternative 3, no effects to cultural resources are anticipated. However, because new construction may be required under these alternatives, the risk that unknown or unidentified

cultural resources may be affected is greater than with the No Action Alternative. The Long-Term Closure Alternative does not have the potential to affect historic properties.

No mitigation is necessary for the No Action Alternative or the Long-Term Closure Alternative. If construction is required in undisturbed areas for either of the restricted access alternatives, cultural resources studies would be undertaken of the area of potential effect. Appropriate treatment measures would be developed and implemented as mitigation should any cultural resources be discovered.

Public Services and Facilities

Under the No Action Alternative, public access to Folsom Dam Road would be restored. Access to public services and facilities would be restored to pre-February 2003 conditions, with the possible addition of some traffic attributed to citywide growth. Under all alternatives, emergency access on Folsom Dam Road would be allowed.

Under the Preferred Alternative—Restricted Access Alternative 2, access to public services and facilities would continue to be adversely affected while the road is closed, during offpeak weekday hours and on weekends. Emergency response times would vary based on the route traveled and time of day. Access to schools and community services during peak commute hours may benefit under this alternative. Under Restricted Access Alternative 3, the impacts would be similar to those under the Preferred Alternative—Restricted Access Alternative 2. Differences would be reflective of the hours of operation and direction of traffic.

Traffic patterns would continue to be diverted under the Long-Term Alternative conditions; consequently, response times depend on the destination and vary greatly on a case-by-case basis. Access to other public services and facilities may be hampered by traffic congestion on nearby streets under this alternative, but as stated in the Transportation discussion above, factors other than road closure also contribute to delays. According to city officials, however, the emergency response time may be adversely affected under this alternative.

Impacts to public services and facilities are closely tied to traffic impacts. Traffic mitigation measures that improve access and circulation would also mitigate some of the impacts associated with the action alternatives.

Other Resource Areas

The impact analysis summarized above represents the resource areas likely to be affected by the Folsom Dam Road Access Restriction alternatives. Input from scoping was also used to define the resource areas addressed. No potential adverse effects were foreseen or identified for land use, geology and seismic hazards, visual resources, or hazardous materials. As described in Section 3.11, land use designations would not be changed; geologic conditions would not be altered; hazardous materials would not be impacted; and although congestion increases may result, the visual character of roadways would not change from the No Action scenario.

REQUIRED PERMITS AND APPROVALS

No resource or regulatory agency permits would be required for reopening the road to the conditions in place prior to its closure in February 2003. The Preferred Alternative—Restricted

Access Alternative 2 may require construction or installation of additional security and traffic management measures, depending on the final design specifications adopted. If implemented, traffic management measures may require other regulatory approvals or permits, which would have to be obtained following the Record of Decision on this EIS. The implementation of Restricted Access Alternative 3 would require similar considerations to those for the Preferred Alternative—Restricted Access Alternative 2. No resource or regulatory agency permits would be required to implement the Long-Term Closure Alternative.

AREAS OF CONTROVERSY

Areas of controversy primarily include changes in traffic congestion, traffic detours (from pre-road closure conditions), potential effects on economic conditions, and the potential for elevated risk of dam failure. Public controversy exists over why this particular road was closed and whether the concerns about safety and the risks of the road remaining open are warranted.

NEXT STEPS IN THE ENVIRONMENTAL PROCESS

Opportunities for public review and input are an essential element of the NEPA review process. Following the preparation of the Final EIS, the environmental process will culminate in a Record of Decision, which will be issued at the conclusion of the NEPA review process. A long-term decision on the proposed action will be made at that time.

**Table ES-2
Summary of Impacts and Mitigation Measures by Alternative**

Study Area	No Action Alternative	Net Effect ¹		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
TRANSPORTATION/TRAFFIC				
Impact: Reduction in Level of Service² (LOS) at Folsom-Auburn Rd. between Folsom Dam Rd. and Inwood Rd. for 2005 only.	LOS of D on roadway segment already functioning below City of Folsom criterion of C.	No difference with respect to No Action Alternative.	Declines from LOS D to E for study year 2005.	Declines from LOS D to F for study year 2005.
Mitigation:	Not applicable. ³	Not applicable.	No site-specific mitigation improvement identified/available. ^{4,5}	No site-specific mitigation improvement identified/available. ^{4,5}
Impact: Reduction in LOS at Folsom-Auburn Rd. between Oak Ave. Parkway and Greenback Lane for 2005 only.	LOS of D on roadway segment already functioning below City of Folsom criterion of C.	Declines from D to F for 2005. No effect in 2013 due to traffic growth unrelated to the proposed action.	Same as Preferred Alternative: declines from D to F for 2005 and has no incremental effect in 2013 due to traffic growth.	Same as Preferred Alternative: declines from D to F for study year 2005 and has no incremental effect in 2013 due to traffic growth.
Mitigation:	Not applicable.	No site-specific mitigation improvement identified/available. ^{4,5}	No site-specific mitigation improvement identified/available. ^{4,5}	No site-specific mitigation improvement identified/available. ^{4,5}

¹ Net effect: Difference in effect between the applicable action alternative and the No Action Alternative.

² LOS (Level of Service): LOS is a relative measure of traffic flow, with LOS A representing the least congestion and LOS F representing the most congestion.

³ Not applicable: If the alternative does not cause an effect with respect to the No Action Alternative, then mitigation is defined as not applicable to that alternative (No Action is the base condition against which these impacts are determined).

⁴ No site-specific improvements to the subject intersection have been identified that could be completed without reconstruction of the intersection or addition of structures. These improvements are beyond the authority of Reclamation and would be infeasible due to the costs and time required to implement them.

⁵ For all affected locations, measures to reduce trip generation through ride sharing, transit use, or signal coordination and timing optimization (such as an Intelligent Transportation System Plan and an Automated Vehicle Locator system) would improve conditions but are beyond the authority of Reclamation and would have to be implemented on a regional or citywide basis. Folsom Dam Road could potentially be reopened to transit or carpools only, which would be within the authority of Reclamation.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
TRANSPORTATION/TRAFFIC				
Impact: Reduction in LOS at Natoma St. between Folsom Blvd. and Sibley St. for 2005 only.	LOS of D on roadway segment already functioning below City of Folsom criterion of C.	Declines from LOS D to F.	Same as Preferred Alternative: declines from LOS D to F.	Same as Preferred Alternative: declines from LOS D to F.
Mitigation:	Not applicable.	No site-specific mitigation improvement identified/available. ^{4,5}	No site-specific mitigation improvement identified/available. ^{4,5}	No site-specific mitigation improvement identified/available. ^{4,5}
Impact: Reduction in LOS at East Natoma St. between Cimmaron Circle and Folsom Dam Rd. for 2005 only.	LOS of D (2005) on roadway segment already functioning below City of Folsom criterion of C.	Declines from LOS D to F.	Same as Preferred Alternative: declines from LOS D to F.	Same as Preferred Alternative: declines from LOS D to F.
Mitigation:	Not applicable.	No site-specific mitigation improvement identified/available. ^{4,5}	No site-specific mitigation improvement identified/available. ^{4,5}	No site-specific mitigation improvement identified/available. ^{4,5}
Impact: Reduction in LOS at intersection of Folsom-Auburn Rd./Oak Ave. Parkway.	LOS of E (AM peak hour) and LOS D (PM peak hour) at intersection already functioning below City of Folsom criterion of C.	Increase in traffic. Operations remain at LOS E for the AM peak hour and decline from LOS D to LOS E in the PM peak hour.	Same as Preferred Alternative, with an increase in traffic. Operations remain at LOS E for the AM peak hour and decline from LOS D to LOS E in the PM peak hour.	Same as Preferred Alternative, with an increase in traffic. Operations remain at LOS E for the AM peak hour and decline from LOS D to LOS E in the PM peak hour.
Mitigation:	Not applicable.	The addition of an eastbound right-turn lane would improve the operations at this intersection. ⁵	The addition of an eastbound right-turn lane would improve the operations at this intersection. ⁵	The addition of an eastbound right-turn lane would improve the operations at this intersection. ⁵

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
TRANSPORTATION/TRAFFIC				
Impact: Reduction in LOS at intersection of Riley St./Natoma St.	LOS of D (AM peak hour) and LOS E (PM peak hour) at intersection already functioning below City of Folsom criterion of C.	Increase in traffic. Operations decline from LOS D to LOS E in the AM peak hour and from LOS E to LOS F in the PM peak hour.	Same as Preferred Alternative, with an increase in traffic. Operations decline from LOS D to LOS E in the AM peak hour and from LOS E to LOS F in the PM peak hour.	Increase in traffic. Operations decline from LOS D to LOS F in the AM peak hour and from LOS E to LOS F in the PM peak hour.
Mitigation:	Not applicable.	No site-specific mitigation improvement identified/available. ^{4,5}	No site-specific mitigation improvement identified/available. ^{4,5}	No site-specific mitigation improvement identified/available. ^{4,5}
Impact: Reduction in LOS at intersection of Folsom Blvd./Natoma St.	Operates at LOS C during AM peak hour and LOS D during PM peak hour.	No change from No Action Alternative.	Reduction in LOS from C to D in AM peak hour and no change from No Action Alternative in PM peak hour.	Reduction in LOS from C to D during AM peak hour. LOS remains at D for PM peak hour as in the No Action Alternative.
Mitigation:	Not applicable.	Not applicable.	The addition of a third southbound through-lane would improve the operations at this intersection. ⁵	The addition of a third southbound through-lane would improve the operations at this intersection. ⁵
Impact: Risk for more accidents as a result of an increase in the number of vehicles on roadways.	The number of vehicles on roadways would continue to increase at the rate of expected citywide growth.	Controlled access on Folsom Dam Road may reduce congestion on some roadways compared to the Long-Term Closure Alternative, but more cars would still be on nearby roads than with the No Action Alternative. More cars on roadways may be associated with a greater risk of accidents for vehicles, pedestrians, and bicyclists.	Same as Preferred Alternative; there would be more cars on nearby roadways than under the No Action Alternative. More cars on roadways may be associated with a greater risk of accidents for vehicles, pedestrians, and bicyclists.	The closure of Folsom Dam Road contributes to congestion on certain roadways. According to data provided by the City of Folsom, an increase in accidents has been reported since the road closure.
Mitigation:	Not applicable.	No feasible mitigation identified.	No feasible mitigation identified.	No feasible mitigation identified.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
TRANSPORTATION/TRAFFIC				
Impact: Risk for potential dam failure could result in loss of use of transportation infrastructure, circulation, and emergency access in Folsom and greater Sacramento County.	Unacceptable level of risk of structural failure and loss of transportation infrastructure.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative and Preferred Alternative.	Risk of event is minimized to extent feasible with respect to vehicular access to the dam.
Mitigation:	The selection of one of the other alternatives to maintain security and safety of the dam would reduce this risk. No other feasible mitigation ⁶ could be identified.	Not applicable.	Not applicable.	Not applicable.
AIR QUALITY				
Impact: Change/diversion in vehicle traffic will increase miles traveled and vehicle-related air pollutant emissions.	No change in existing levels of traffic-related pollutant emission rates.	Increase is within State and Federal thresholds and would not result in an exceedance of any air quality standards.	Same as Preferred Alternative. No exceedance of air quality standards would result.	Same as Preferred Alternative. No exceedance of air quality standards would result.
Mitigation:	Not applicable.	Not applicable.	Not applicable.	Not applicable.

⁶ No feasible mitigation: Mitigation was considered but not found to be feasible because it could not reasonably or practically reduce the net adverse effect. Therefore, mitigation is not recommended.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
AIR QUALITY				
Impact: Risk for potential dam failure could result in a range of effects from actual emissions reductions due to lack of mobility from road closures to increases in emissions from new inefficiencies. The magnitude and intensity may vary by location.	Risk of changes to air quality, at least on a temporary basis.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative and Preferred Alternative.	Risk of dam failure is minimized to extent feasible with respect to vehicular access to the dam.
<i>Mitigation:</i>	Mitigation would consist of selection of one of the other alternatives to maintain security and safety of the dam. No other feasible mitigation could be identified.	Not applicable.	Not applicable.	Not applicable.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
NOISE				
<i>Impact:</i> Traffic noise levels are predicted to increase by less than 2 dBA at all study locations except Folsom Dam Road and Natoma Street. An increase of less than 2 dBA is considered imperceptible.	Existing and future levels on nearly all study roadways except portions of Natoma Street between Folsom Blvd. and Sibley St. are over 65 dBA and exceed local and Federal noise thresholds and abatement criteria.	For 2005, an increase of 1.1 dBA or less is anticipated on all study locations except for Folsom Dam Road. For 2013, an increase of up to 2.3 dBA is predicted on one roadway segment: Natoma Street between Folsom Boulevard and Sibley Street. All other locations are predicted to have less than a 2 dBA increase.	Same as Preferred Alternative. Similar increases are predicted for the same locations.	For 2005, all study locations would have less than a 2 dBA increase except for one roadway segment: Natoma Street between Folsom Boulevard and Sibley Street. For 2013, similar increases to the Preferred Alternative are predicted for all locations.
<i>Mitigation:</i>	Not applicable.	No mitigation is proposed for study year 2005. For impacts on Natoma Street predicted for 2013, measures such as constructing noise barriers, acquiring property or interest, insulating and/or air-conditioning public use or nonprofit institutional structures, and repaving roads could reduce noise impacts but were found to be infeasible (see Section 3.3).	Same as Preferred Alternative. No feasible noise mitigation identified (see Section 3.3).	Same as Preferred Alternative. No feasible noise mitigation identified (see Section 3.3).

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
NOISE				
Impact: Risk for potential dam failure could result in a range of effects from actual noise reductions due to lack of mobility from road closures to increases in noise levels. The magnitude and intensity may vary on a site-by-site basis.	Ambient noise levels would change, least on a temporary basis.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative and Preferred Alternative.	Risk of dam failure is minimized to extent feasible with respect to vehicular access to the dam.
Mitigation:	Mitigation would consist of selection of one of the other alternatives to maintain security and safety of the dam. No other feasible mitigation could be identified.	Not applicable.	Not applicable.	Not applicable.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
ECONOMIC AND SOCIAL CONDITIONS				
<i>Impact:</i> Businesses report a wide range of effects from “none” to “severe.” Individual businesses have reported access and transportation induced declines in sales/revenues.	No loss of business revenues with respect to access to Folsom Dam Road. Competition, industry demand, growth patterns, and other dynamic economic factors may contribute to business effects.	Declines in direct output, employment, and income may result, but to a smaller degree than under the Long-Term Closure Alternative. Restricted access would be available. Some marginal economic benefit expected compared to long-term closure. However, because the road would remain closed during nonpeak and weekend hours, a net loss of revenues relative to the No Action Alternative would still occur.	As with Preferred Alternative, restricted access would be available. Some marginal economic benefit expected compared to the Long-Term Closure Alternative, but less than under the Preferred Alternative. Because the road would remain closed during nonpeak and weekend hours, a net loss of revenues relative to the No Action Alternative would still occur.	Declines in direct output, employment, and income may result. Economic factors, including road closure, may contribute to an estimated maximum of 21 percent among the 177 businesses located in the immediate vicinity of streets most directly affected by closure.
<i>Mitigation:</i>	Not applicable.	Reclamation has no legal obligation or authorization to provide mitigation for impacts associated with the closure of a private maintenance road. Economic effects vary by location and by different causes. Claims for mitigation or compensation, if made, would have to be evaluated based on individual review of direct and demonstrable effects.	Same as Preferred Alternative; any mitigation would have to be determined on a case-by-case basis if direct and demonstrable impacts can be established.	Same as Preferred Alternative; any mitigation would have to be determined on a case-by-case basis if direct and demonstrable impacts can be established.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
ECONOMIC AND SOCIAL CONDITIONS				
Impact: Risk for potential dam failure could result in billions of dollars of losses. Agriculture, recreation, business revenues, infrastructure, and personal property would be affected.	Unacceptable level of risk. Losses may be temporary or sustained, and would vary within the region.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative and Preferred Alternative.	Risk of dam failure is minimized to extent feasible with respect to vehicular access to the dam.
Mitigation:	The selection of one of the other alternatives to maintain security and safety of the dam would reduce this risk. No other feasible mitigation could be identified.	Not applicable.	Not applicable.	Not applicable.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
WATER RESOURCES AND SUPPLY				
<i>Impact:</i> Indirect impacts to water quality from an increase in surface water runoff due to traffic changes.	No change in surface water runoff, either in terms of quality or quantity.	Under this alternative, an incremental adverse impact may result from the construction of inspection facilities. An increase in vehicle miles traveled could result in an increase of air pollutants and, in turn, a minor increase in surface water runoff pollutants from roads in comparison to the No Action Alternative.	Same as Preferred Alternative; an incremental adverse impact may result from the construction of inspection facilities. However, because fewer cars would cross Folsom Dam Road under this alternative, fewer facilities may be needed, resulting in less impact than under the Preferred Alternative. An indirect reduction in water quality may result from increased vehicle miles traveled.	An indirect reduction in water quality may result from increased vehicle miles traveled.
<i>Mitigation:</i>	Not applicable.	For any construction of inspection facilities, employ Best Management Practices for erosion control and waste handling during construction.	Same as Preferred Alternative.	Same as Preferred Alternative.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
WATER RESOURCES AND SUPPLY				
Impact: Risk for potential dam failure could result in widespread impacts to water districts and water-related features in the area.	Widespread impacts to water districts and people would result if a dam failure occurs. This alternative would not be consistent with Executive Order 11988 on Floodplain Management.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative and Preferred Alternative.	Risk of dam failure is minimized to extent feasible with respect to vehicular access to the dam.
Mitigation:	The selection of one of the other alternatives to maintain security and safety of the dam would reduce this risk. No other feasible mitigation could be identified.	Not applicable.	Not applicable.	Not applicable.
BIOLOGICAL RESOURCES				
Impact: Potential for impacts to habitat or species from construction of inspection facilities or risk of inundation.	No physical changes to habitat or species would occur. Traffic patterns would be restored to pre-February 2003 levels.	Habitats have been previously disturbed in areas where construction of inspection facilities could occur. No listed species, wetlands or other sensitive habitats would be affected.	Similar to Preferred Alternative, although construction footprint may be slightly smaller because fewer inspection stations would be required.	No incremental effect from the No Action Alternative.
Mitigation:	Not applicable.	Focused surveys by a qualified biologist would be conducted prior to construction. Design would have to avoid habitat impacts, as necessary.	Focused surveys by a qualified biologist would be conducted prior to construction. Design would have to avoid habitat impacts, as necessary.	Not applicable.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
BIOLOGICAL RESOURCES				
Impact: Risk for potential dam failure could result in the loss of habitats of sensitive and listed species.	Habitats of sensitive and listed species and other aquatic and terrestrial wildlife would be impacted. Woodland, mixed forest and riparian vegetation may be lost. Species that utilize these habitats would be directly and immediately impacted. Over time, these habitats would be restored.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative and Preferred Alternative.	Risk of dam failure is minimized to extent feasible with respect to vehicular access to the dam.
Mitigation:	The selection of one of the other alternatives to maintain security and safety of the dam would reduce this risk. No other feasible mitigation could be identified.	Not applicable.	Not applicable.	Not applicable.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
ENERGY AND POWER SUPPLY				
Impact: An indirect impact to fuel consumption may result from an increase in vehicle miles traveled in Folsom.	No effects to energy supply or fuel consumption would occur.	Energy supply would remain unchanged on a regional basis from the No Action Alternative. However, assuming that vehicle miles traveled in Folsom would increase relative to the No Action Alternative, a slight increase in fuel consumption may occur.	Same as Preferred Alternative. Regional energy supply would remain unchanged and there would be a slight increase in fuel consumption due to an increase in vehicle miles traveled in Folsom.	Regional energy supply would remain unchanged. Estimated fuel consumption is slightly higher than the other alternatives but would not result in a substantial change in fuel consumption.
Mitigation:	Not applicable.	No mitigation identified.	No mitigation identified.	No mitigation identified.
Impact: Risk for potential dam failure could result in temporary energy and power losses.	Temporary effects on power supply would likely result.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative and Preferred Alternative.	Risk of dam failure is minimized to extent feasible with respect to vehicular access to the dam.
Mitigation:	The selection of one of the other alternatives to maintain security and safety of the dam would reduce this risk. No other feasible mitigation could be identified.	Not applicable.	Not applicable.	Not applicable.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
RECREATION				
Impact: Inconvenience to local recreation users who would encounter delays or be rerouted in order to access shoreline and water recreation resources.	No impacts to local or regional recreation users would occur.	Access to some locations may be less convenient with respect to the No Action Alternative, but access around Folsom Lake would be slightly better than under the Long-Term Closure Alternative. Overall use records have not substantially changed since closure.	Same as Preferred Alternative.	Same as Preferred Alternative. Access to some locations may be less convenient.
Mitigation:	Not applicable.	No feasible mitigation identified (see Section 3.8.3).	No feasible mitigation identified (see Section 3.8.3).	No feasible mitigation identified (see Section 3.8.3).
Impact: Risk for potential dam failure could result in effects to reservoir-based activities and associated land-based recreation.	If dam failure occurs, local residents and visitors would be affected by the impacts to reservoir-based recreational resources.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative and Preferred Alternative.	Risk of dam failure is minimized to extent feasible with respect to vehicular access to the dam.
Mitigation:	The selection of one of the other alternatives to maintain security and safety of the dam would reduce this risk. No other feasible mitigation could be identified.	Not applicable.	Not applicable.	Not applicable.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
CULTURAL RESOURCES				
Impact: Potential for disturbance to known or unknown cultural resource sites.	No potential to affect historic properties.	If construction of inspection facilities is required in undisturbed areas, potential exists for discovery of undocumented buried cultural resources during construction.	Same as Preferred Alternative. Potential exists for discovery of undocumented buried cultural resources during construction of inspection facilities.	No potential to affect historic properties.
Mitigation:	Not applicable.	Undertake detailed cultural resources studies in area of potential effect as necessary. Consult with federally recognized Native American tribes. Develop appropriate treatment measures should cultural resources be discovered.	Same as Preferred Alternative. Cultural resources studies would be undertaken for the area of potential effect.	Not applicable.
Impact: Risk for potential dam failure could result in erosion of soils and effects to historic structures.	If a dam failure were to occur, there would be a potential for disturbance or adverse effects to archaeological and historic resources.	Risk to security of dam reduced; some indirect risks to cultural resources remain.	Risk to security of dam reduced; some indirect risks to cultural resources remain.	There would be no impact to cultural resources.
Mitigation:	Not applicable.	Not applicable.	Not applicable.	Not applicable.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
PUBLIC SERVICES AND FACILITIES				
Impact: Indirect impacts to public services and facilities could result from changes in traffic patterns.	No impacts to public services or facilities would occur.	Folsom Dam Road remains open to emergency response access. Depending on specific routes and destinations, inconveniences to local residents and emergency response personnel may result from changes to traffic patterns. The impact would be relatively less than the Long-Term Closure Alternative because Folsom Dam Road would be accessible during peak commute hours.	Same as Preferred Alternative. Emergency response access remains open, but inconveniences due to traffic changes remain. The impact would be relatively less than the Long-Term Closure Alternative because Folsom Dam Road would be accessible during peak commute hours and relatively greater than the Preferred Alternative because hours of public access would be further restricted.	Folsom Dam Road remains open to emergency response access. Depending on specific routes and destinations, inconveniences to local residents and emergency response personnel may result from changes to traffic patterns.
Mitigation:	Not applicable.	No feasible mitigation identified specific to public services or facilities. Traffic improvement measures such as signal coordination and timing optimization through implementation of an Intelligent Transportation System Plan and an Automated Vehicle Locator system would reduce the impact.	No feasible mitigation identified specific to public services or facilities. Traffic improvement measures such as signal coordination and timing optimization through implementation of an Intelligent Transportation System Plan and an Automated Vehicle Locator system would reduce the impact.	No feasible mitigation identified specific to public services or facilities. Traffic improvement measures such as signal coordination and timing optimization through implementation of an Intelligent Transportation System Plan and an Automated Vehicle Locator system would reduce the impact.

Table ES-2, continued

Study Area	No Action Alternative	Net Effect		
		Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
PUBLIC SERVICES AND FACILITIES				
<i>Impact:</i> Risk for potential dam failure could result in impacts to public facilities. Public services, including emergency access, may incur temporary effects.	Unacceptable level of risk. Losses may be temporary or sustained and would vary at different locations.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative.	Controlled access with inspections reduces risks and increases safety compared to the No Action Alternative and Preferred Alternative.	Risk of dam failure is minimized to extent feasible with respect to vehicular access to the dam.
<i>Mitigation:</i>	The selection of one of the other alternatives to maintain security and safety of the dam would reduce this risk. No other feasible mitigation could be identified.	Not applicable.	Not applicable.	Not applicable.

This page intentionally left blank.

TABLE OF CONTENTS

Cover Sheet

Executive Summary ES-1

Table of Contents i

Section 1 Purpose and Need for Action 1-1

- 1.1 Purpose and Need 1-1
- 1.2 Background 1-1
 - 1.2.1 Construction and Design of Folsom Dam and Folsom Dam Road 1-1
 - 1.2.2 Risk and Road Closure 1-2
 - 1.2.3 Public Use of Folsom Dam Road Prior to Closure 1-9
- 1.3 Post-Closure Actions 1-9

Section 2 Alternatives 2-1

- 2.1 Process Used to Formulate Alternatives 2-1
 - 2.1.1 Identification of Alternatives for Analysis 2-1
 - 2.1.2 Operational Constraints 2-1
- 2.2 Alternatives Considered in Detail 2-2
 - 2.2.1 No Action Alternative 2-4
 - 2.2.2 Preferred Alternative—Restricted Access Alternative 2 2-4
 - 2.2.3 Restricted Access Alternative 3 2-8
 - 2.2.4 Long-Term Closure Alternative 2-8
- 2.3 Alternatives Considered and Eliminated from Detailed Study 2-8
 - 2.3.1 Restricted Access Alternative 1 2-8
 - 2.3.2 New American River Bridge Alternative 2-9
 - 2.3.3 Bicycle and Pedestrian Access Alternative 2-9

Section 3 Affected Environment, Environmental Consequences, and Mitigation 3-1

- 3.1 Transportation 3.1-1
 - 3.1.1 Affected Environment 3.1-4
 - 3.1.1.1 Transportation Facilities 3.1-4
 - 3.1.1.2 Existing (Pre-Closure) Traffic Conditions 3.1-7
 - 3.1.1.3 Existing (Post-Closure) Traffic Conditions 3.1-13
 - 3.1.2 Environmental Consequences 3.1-17
 - 3.1.2.1 No Action Alternative 3.1-27
 - 3.1.2.2 Preferred Alternative—Restricted Access Alternative 2 3.1-28
 - 3.1.2.3 Restricted Access Alternative 3 3.1-31
 - 3.1.2.4 Long-Term Closure Alternative 3.1-32

TABLE OF CONTENTS

3.1.3	Mitigation.....	3.1-34
3.1.3.1	No Action Alternative.....	3.1-35
3.1.3.2	Preferred Alternative—Restricted Access Alternative 2.....	3.1-35
3.1.3.3	Restricted Access Alternative 3	3.1-37
3.1.3.4	Long-Term Closure Alternative.....	3.1-37
3.2	Air Quality	3.2-1
3.2.1	Affected Environment.....	3.2-1
3.2.1.1	Air Quality Study Area	3.2-1
3.2.1.2	Environmental Setting	3.2-1
3.2.1.3	Regulatory Setting	3.2-3
3.2.2	Environmental Consequences.....	3.2-6
3.2.2.1	No Action Alternative.....	3.2-10
3.2.2.2	Preferred Alternative—Restricted Access Alternative 2.....	3.2-12
3.2.2.3	Restricted Access Alternative 3	3.2-13
3.2.2.4	Long-Term Closure Alternative.....	3.2-13
3.3	Noise.....	3.3-1
3.3.1	Affected Environment.....	3.3-1
3.3.1.1	Noise Study Area	3.3-1
3.3.1.2	Environmental Setting	3.3-1
3.3.1.3	Regulatory Setting	3.3-1
3.3.2	Environmental Consequences.....	3.3-4
3.3.2.1	No Action Alternative.....	3.3-13
3.3.2.2	Preferred Alternative—Restricted Access Alternative 2	3.3-13
3.3.2.3	Restricted Access Alternative 3	3.3-14
3.3.2.4	Long-Term Closure Alternative.....	3.3-14
3.3.3	Mitigation.....	3.3-14
3.3.3.1	No Action Alternative.....	3.3-14
3.3.3.2	Preferred Alternative—Restricted Access Alternative 2	3.3-14
3.3.3.3	Restricted Access Alternative 3	3.3-16
3.3.3.4	Long-Term Closure Alternative.....	3.3-16
3.4	Economic and Social Conditions	3.4-1
3.4.1	Affected Environment.....	3.4-1
3.4.1.1	Sacramento County	3.4-1
3.4.1.2	Folsom.....	3.4-6
3.4.2	Environmental Consequences.....	3.4-9
3.4.2.1	No Action Alternative.....	3.4-18
3.4.2.2	Preferred Alternative—Restricted Access Alternative 2.....	3.4-20
3.4.2.3	Restricted Access Alternative 3	3.4-21
3.4.2.4	Long-Term Closure Alternative.....	3.4-21
3.4.3	Mitigation.....	3.4-22
3.4.3.1	No Action Alternative.....	3.4-22

TABLE OF CONTENTS

	3.4.3.2 Preferred Alternative—Restricted Access Alternative 2.....	3.4-22
	3.4.3.3 Restricted Access Alternative 3	3.4-23
	3.4.3.4 Long-Term Closure Alternative.....	3.4-23
3.5	Water Resources and Supply	3.5-1
3.5.1	Affected Environment.....	3.5-1
3.5.1.1	Surface Water.....	3.5-1
3.5.1.2	Groundwater	3.5-2
3.5.2	Environmental Consequences.....	3.5-5
3.5.2.1	No Action Alternative.....	3.5-6
3.5.2.2	Preferred Alternative—Restricted Access Alternative 2	3.5-6
3.5.2.3	Restricted Access Alternative 3	3.5-7
3.5.2.4	Long-Term Closure Alternative.....	3.5-7
3.5.3	Mitigation.....	3.5-8
3.5.3.1	No Action Alternative.....	3.5-8
3.5.3.2	Preferred Alternative—Restricted Access Alternative 2	3.5-8
3.5.3.3	Restricted Access Alternative 3	3.5-8
3.5.3.4	Long-Term Closure Alternative.....	3.5-8
3.6	Biological Resources	3.6-1
3.6.1	Affected Environment.....	3.6-1
3.6.1.1	Habitat Types	3.6-1
3.6.1.2	Special-Status Species	3.6-4
3.6.2	Environmental Consequences.....	3.6-8
3.6.2.1	No Action Alternative.....	3.6-8
3.6.2.2	Preferred Alternative—Restricted Access Alternative 2	3.6-9
3.6.2.3	Restricted Access Alternative 3	3.6-10
3.6.2.4	Long-Term Closure Alternative.....	3.6-10
3.6.3	Mitigation.....	3.6-10
3.6.3.1	No Action Alternative.....	3.6-10
3.6.3.2	Preferred Alternative—Restricted Access Alternative 2	3.6-10
3.6.3.3	Restricted Access Alternative 3	3.6-11
3.6.3.4	Long-Term Closure Alternative.....	3.6-11
3.7	Energy and Power Supply.....	3.7-1
3.7.1	Affected Environment.....	3.7-1
3.7.1.1	Power Generation	3.7-1
3.7.1.2	Fuel Consumption	3.7-2
3.7.2	Environmental Consequences.....	3.7-2
3.7.2.1	No Action Alternative	3.7-5
3.7.2.2	Preferred Alternative—Restricted Access Alternative 2.....	3.7-6
3.7.2.3	Restricted Access Alternative 3	3.7-6
3.7.2.4	Long-Term Closure Alternative	3.7-6

TABLE OF CONTENTS

3.8	Recreation	3.8-1
3.8.1	Affected Environment.....	3.8-1
3.8.1.1	Levels of Use	3.8-1
3.8.1.2	Recreation Facilities.....	3.8-2
3.8.2	Environmental Consequences.....	3.8-12
3.8.2.1	No Action Alternative.....	3.8-12
3.8.2.2	Preferred Alternative—Restricted Access Alternative 2.....	3.8-13
3.8.2.3	Restricted Access Alternative 3	3.8-15
3.8.2.4	Long-Term Closure Alternative.....	3.8-15
3.8.3	Mitigation.....	3.8-17
3.8.3.1	No Action Alternative.....	3.8-17
3.8.3.2	Preferred Alternative—Restricted Access Alternative 2.....	3.8-17
3.8.3.3	Restricted Access Alternative 3	3.8-17
3.8.3.4	Long-Term Closure Alternative.....	3.8-17
3.9	Cultural Resources	3.9-1
3.9.1	Affected Environment.....	3.9-1
3.9.1.1	Historical Setting	3.9-1
3.9.1.2	Regulatory Setting	3.9-3
3.9.2	Environmental Consequences.....	3.9-4
3.9.2.1	No Action Alternative.....	3.9-5
3.9.2.2	Preferred Alternative—Restricted Access Alternative 2.....	3.9-5
3.9.2.3	Restricted Access Alternative 3	3.9-5
3.9.2.4	Long-Term Closure Alternative.....	3.9-5
3.9.3	Mitigation.....	3.9-6
3.9.3.1	No Action Alternative.....	3.9-6
3.9.3.2	Preferred Alternative—Restricted Access Alternative 2.....	3.9-6
3.9.3.3	Restricted Access Alternative 3	3.9-6
3.9.3.4	Long-Term Closure Alternative.....	3.9-6
3.10	Public Services and Facilities	3.10-1
3.10.1	Affected Environment.....	3.10-1
3.10.1.1	Schools	3.10-1
3.10.1.2	Police and Fire Protection	3.10-1
3.10.1.3	Hospitals.....	3.10-2
3.10.2	Environmental Consequences.....	3.10-2
3.10.2.1	No Action Alternative	3.10-2
3.10.2.2	Preferred Alternative—Restricted Access Alternative 2.....	3.10-2
3.10.2.3	Restricted Access Alternative 3	3.10-3
3.10.2.4	Long-Term Closure Alternative	3.10-4
3.10.3	Mitigation.....	3.10-4
3.11	Other Resource Issues, Requirements, and Consultation and Coordination	3.11-1

TABLE OF CONTENTS

3.11.1	Other Environmental Resource Issue Areas	3.11-1
3.11.2	Related Projects and Associated Cumulative Impacts.....	3.11-1
3.11.2.1	Lake Natoma Crossing.....	3.11-2
3.11.2.2	Folsom Historic District Traffic Calming Program	3.11-2
3.11.2.3	Folsom Bridge Project.....	3.11-2
3.11.2.4	Folsom Dam Outlet Modification	3.11-3
3.11.2.5	Folsom Dam Raise	3.11-4
3.11.2.6	Folsom Redundant Water Supply Intake.....	3.11-5
3.11.2.7	Embankment Dams and Dikes Static Modification	3.11-5
3.11.2.8	Concrete Dam Seismic and Static Modifications...	3.11-6
3.11.2.9	Local and Regional Transportation Projects	3.11-6
3.11.3	Relationship Between Short-Term Uses and Maintenance of Long-Term Productivity	3.11-6
3.11.4	Irreversible or Irrecoverable Commitments of Resources.....	3.11-8
3.11.5	Indian Trust Assets	3.11-9
3.11.6	Environmental Justice.....	3.11-9
3.11.7	Consultation and Coordination	3.11-9
3.11.7.1	Authorization.....	3.11-9
3.11.7.2	Scoping Process and Summary	3.11-10
3.11.7.3	Scoping Report.....	3.11-10
3.11.7.4	Permits or Other Actions Required for Implementation	3.11-10
3.11.8	Scope of the EIS.....	3.11-10
Section 4	References	4-1
Section 5	List of Preparers	5-1
Section 6	Distribution List.....	6-1
6.1	Federal Agencies and Elected Officials.....	6-1
6.2	State Agencies and Elected Officials.....	6-1
6.3	Regional Agencies	6-3
6.4	Local Government	6-3
6.5	Organizations	6-6
6.6	Individuals.....	6-9
Section 7	Index.....	7-1

TABLE OF CONTENTS

List of Tables

ES-1	Summary Comparison of Alternatives
ES-2	Summary of Impacts and Mitigation Measures by Alternative
2-1	Comparison of Alternatives
2-2	Relationship of Roadway Capacity and Delay
3.1-1	Qualitative Description of Level of Service
3.1-2	Existing Roadway Segment Levels of Service
3.1-3	Existing Intersection Levels of Service
3.1-4	2005 Peak Hour Travel Times
3.1-5	2005 Roadway Segment Levels of Service
3.1-6	2005 Intersection Levels of Service
3.1-7	2013 Transportation Improvement Projects Within Regional Study Area
3.1-8	2013 Peak Hour Travel Times
3.1-9	2013 Roadway Segment Levels of Service
3.1-10	2005 Travel Model Results
3.1-11	2013 Travel Model Results
3.2-1	Average Climatological Data at Folsom Dam
3.2-2	2003 Estimated Annual Average Emissions Sacramento Valley Air Basin (Tons)
3.2-3	State and Federal Ambient Air Quality Standards
3.2-4	MTP and MTIP Emission Budget Tests
3.2-5	Estimated Vehicle Emissions, 2005 and 2013
3.2-6	No Action Alternative Estimated Maximum Carbon Monoxide Concentrations
3.3-1	FHWA Noise Abatement Criteria
3.3-2	Substantial Increases for Transportation Noise Exposure
3.3-3	Traffic Noise Measurement Sites for Traffic Noise Model Calibrations Folsom Dam Road Closure Area
3.3-4	Noise Measurement Summary and FHWA Model Calibration Folsom Dam Road Closure Area
3.3-5	Measured 24-Hour Noise Levels Folsom Dam Road Closure Area
3.3-6	FHWA Highway Traffic Noise Prediction Model Inputs Folsom Dam Road Closure Area

TABLE OF CONTENTS

List of Tables, continued

3.3-7	Average Daily Traffic Volumes, Folsom Dam Road Closure Area
3.3-8	Predicted Traffic Noise Levels in Terms of L_{dn} or Design Hour L_{eq} , dB, Folsom Dam Road Closure Area
3.3-9	Predicted Changes in Traffic Noise Levels in Terms of L_{dn} or Design Hour L_{eq} , dB, Folsom Dam Road Closure Area
3.4-1	Population Statistics for Sacramento County and Folsom, 1990–2004 (Select Years)
3.4-2	Industry Employment and Trends, Sacramento County, 1990–2000
3.4-3	Major Employers in Sacramento County
3.4-4	Economic Output in Sacramento County, 2000
3.4-5	Production and Value of Output, 1998 and 2002
3.4-6	Economic Output in Folsom, 2000
3.4-7	Estimated Annual Recreation Spending, Folsom Lake SRA, by Type of Activity
3.4-8	Businesses Identified and Contacted, Folsom, by Street
3.4-9	Types of Businesses Contacted and Reported Percent Sales Declines
3.4-10	Plans of Surveyed Businesses to Move or Close
3.7-1	2004–2006 Statewide Supply/Demand Balance (MW)
3.7-2	Fuel Consumption Estimates
3.8-1	Folsom Lake Marina Facilities
3.8-2	Folsom Lake SRA Boat Launch Facilities
3.8-3	Folsom Lake SRA Campground Facilities
3.8-4	Folsom Lake SRA Day Use Facilities
3.8-5	Folsom Lake SRA Trail Facilities
3.8-6	Folsom Lake SRA Recreation Facility Access
3.10-1	City of Folsom Schools
3.11-1	Summary of Short-Term Uses and Maintenance and Enhancement of Long-Term Productivity

List of Figures

1-1	Regional Vicinity Map
1-2	Local Vicinity Map
1-3	Regional Population Map

TABLE OF CONTENTS

List of Figures, continued

- 1-4 Diagram of Level of Service (LOS) for Multi-Lane Roadways
- 3.1-1 Traffic Study Locations
- 3.1-2 Existing Bicycle Facilities
- 3.1-3 Existing Transit Facilities
- 3.1-4 Pre-Closure Peak Hour Intersection Traffic Volumes and Lane Configurations
- 3.1-5 Post-Closure (and Before Traffic Calming Program) Peak Hour Intersection Traffic Volumes and Lane Configurations
- 3.1-6 Post-Closure (and With Traffic Calming Program) Peak Hour Intersection Traffic Volumes and Lane Configurations
- 3.1-7 2005 No Action Peak Hour Intersection Traffic Volumes and Lane Configurations
- 3.3-1 Traffic Noise Level Measurement Sites
- 3.5-1 Folsom Dam Regional Hydrography
- 3.7-1 Statewide Power Plants and Folsom Reservoir and Power Plant
- 3.8-1 Recreation Facilities at Folsom Lake SRA

List of Appendices

- A Environmental Scoping
- B Technical Methods and Analysis: Transportation, Air Quality, and Noise
- C Biological Data: Species List
- D Environmental Consequences of Dam Failure (Confidential; Submitted Under Separate Cover)
- E Comments and Responses on the Draft Environmental Impact Statement

TABLE OF CONTENTS

List of Acronyms and Abbreviations

$\mu\text{g}/\text{m}^3$	microgram per cubic meter
Caltrans	California Department of Transportation
CAP	Clean Air Plan
CARB	California Air Resources Board
CDFG	California Department of Fish and Game
CFR	Code of Federal Regulations
CNDDDB	California Natural Diversity Data Base
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CSUS	California State University, Sacramento
dB	decibel
dBA	A-weighted sound pressure level (in decibels)
DTRA	Defense Threat Reduction Agency
EIS	Environmental Impact Statement
ESU	Evolutionarily Significant Unit
FHWA	Federal Highway Administration
FICON	Federal Interagency Committee on Noise
HAP	hazardous air pollutant
HCM	<i>Highway Capacity Manual</i> (Transportation Research Board 2000)
ISO	(California) Independent System Operator
km	kilometer
kW	kilowatt
L_{dn}	day/night average sound level
L_{eq}	equivalent sound level
L_{max}	maximum noise level recorded during a noise event
L_n	sound level exceeded “n” percent of the time during a sample interval (L_{90} , L_{50} , L_{10} , etc.)
LOS	Level of Service
MTP	Metropolitan Transportation Plan
MTIP	Metropolitan Transportation Implementation Plan
MW	megawatt

TABLE OF CONTENTS

NAC	Noise Abatement Criteria
NEPA	National Environmental Policy Act
NO ₂	nitrogen dioxide
NOI	Notice of Intent
NO _x	nitrogen oxides
O ₃	ozone
PM ₁₀	particulate matter less than 10 micrometers in diameter
PM _{2.5}	particulate matter less than 2.5 micrometers in diameter
ppm	part per million
Protocol	<i>Traffic Noise Analysis Protocol for New Highway Construction and Reconstruction Projects (Caltrans 1998)</i>
Reclamation	U.S. Department of the Interior, Bureau of Reclamation
ROG	reactive organic gas
SACMET	Sacramento Regional Travel Demand Model
SACOG	Sacramento Area Council of Governments
SJWD	San Juan Water District
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SO ₂	sulfur dioxide
SRA	State Recreation Area
TAC	toxic air contaminant
US-50	U.S. Highway 50
USACE	U.S. Army Corps of Engineers
USC	U.S. Code
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VMT	vehicle miles traveled
vpd	vehicles per day

This Environmental Impact Statement (EIS) addresses the U.S. Department of the Interior, Bureau of Reclamation's (Reclamation's) proposed action and alternatives for vehicular access restriction along Folsom Dam Road in the City of Folsom, California. Folsom is approximately 25 miles east of Sacramento in the Sierra Nevada foothills, west of Placerville (Figure 1-1).

1.1 PURPOSE AND NEED

The **purpose and need** for this action is to:

- Control access to Folsom Dam, including all traffic on Folsom Dam Road
- Minimize the security risks and maximize the safety of Folsom Dam and of the entire Sacramento metropolitan area downstream of the dam

1.2 BACKGROUND

1.2.1 Construction and Design of Folsom Dam and Folsom Dam Road

In 1944, Congress authorized the U.S. Army Corps of Engineers (USACE) to construct Folsom Reservoir as a flood control structure on the American River upstream of Sacramento. The Reclamation Act of October 14, 1949, transferred Folsom Dam and Reservoir from the USACE to Reclamation under the supervision of the Secretary of the Interior, to be integrated with the Central Valley Project and operated as a multipurpose project for flood control, irrigation, hydropower generation, and water supply. The dam was designed to handle a 120-year storm. Folsom Dam and Reservoir was completed in 1956; however, its function as a flood control facility was proven even before its completion during a record storm event that threatened Sacramento in 1956.

When the dam was built, the USACE constructed a maintenance road atop the crest of the dam. This road eventually became known as Folsom Dam Road. The two-lane, undivided road is approximately 2.3 miles long and connects Folsom-Auburn Road on the north side of the American River with East Natoma Street on the south side (Figure 1-2). About 1,400 feet of the road crosses the concrete monoliths of the main dam structure and spillway. Approximately 4,000 feet of the road lies on top of or adjacent to the earth embankment section of the dam. The land on either side of the dam is within Folsom city limits.

Folsom Dam Road provides direct access to the industrial complex at Folsom Dam, which houses Reclamation staff, shops, warehouses, and administrative buildings. The resources at the complex are used to operate and maintain facilities and equipment in support of the dam's core functions. In addition, Reclamation personnel at the complex have areawide responsibilities for land management, environmental monitoring and documentation, repayment of contract administration, recreation program administration, and oversight of operations and maintenance at remote locations. The complex also houses California Department of Parks and Recreation staff and shops and buildings supporting the Folsom State Recreation Area (SRA). Furthermore, Folsom Dam Road provides access to Federal property east of the dam and adjacent to Folsom Prison.

Prior to the construction of Folsom Dam, the USACE consulted with the California Highway Commission regarding the necessity for a public highway crossing over Folsom Dam such that,

under Federal law, the State of California (the State) would be obligated to reimburse the costs incurred by the Federal Government for the design and construction of the road. The California Highway Commission did not find a need for a public highway across the dam. Accordingly, no State route was designated across the dam, and Folsom Dam Road was neither officially certified nor dedicated for use by the general public.

As a result, Folsom Dam Road was built to provide maintenance access to the dam structure. The construction and design features of Folsom Dam Road are considered inadequate for general traffic use. However, growth within the City of Folsom and other surrounding cities and communities has resulted in drivers relying on Folsom Dam Road as a traffic artery. Consequently, Reclamation has expended funds over the years to maintain and repair the road. Neither the State nor any local governments contribute funds for the maintenance and operation of Folsom Dam Road.

1.2.2 Risk and Road Closure

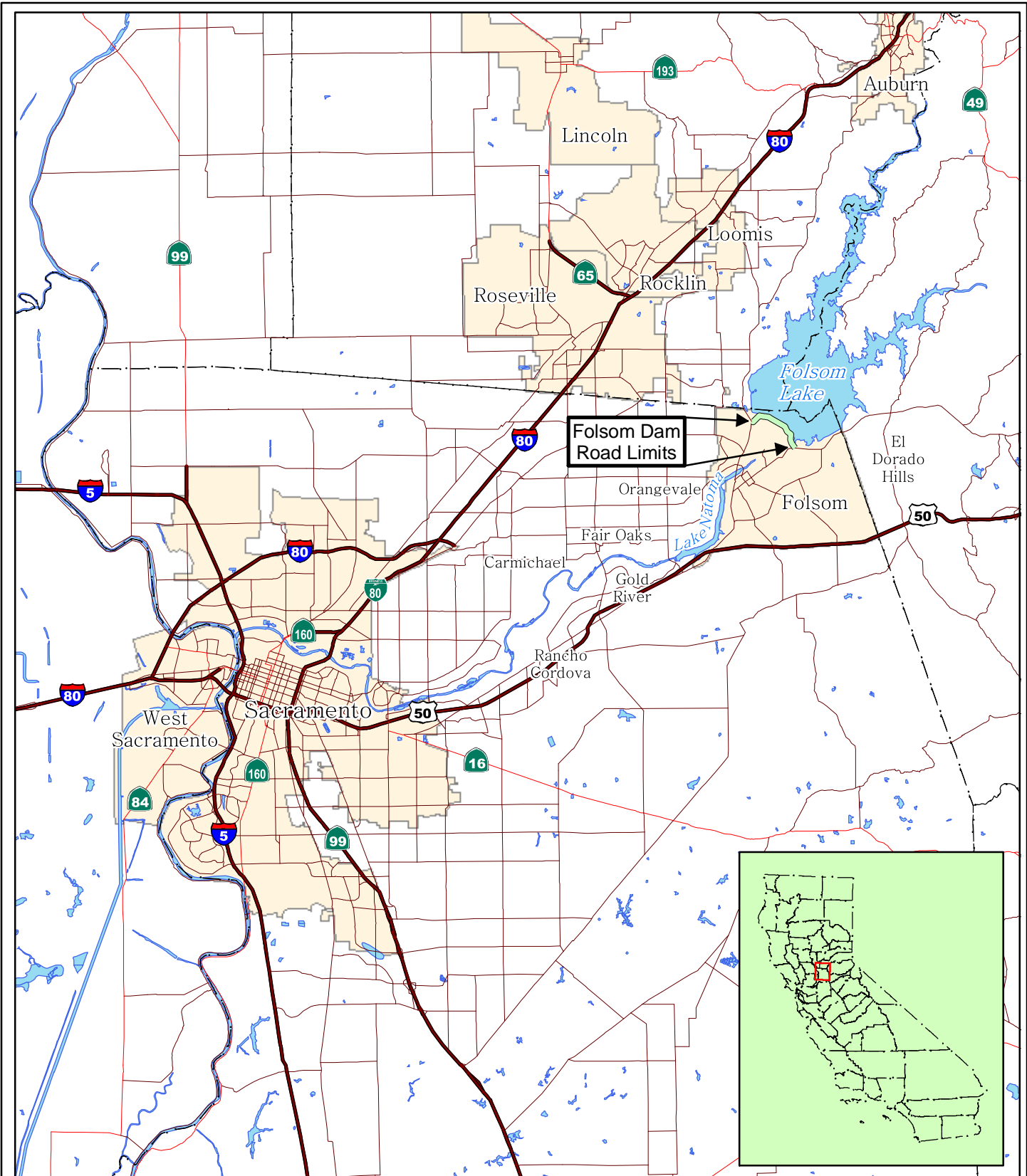
Unlike any other dam of comparable size in the United States, Folsom Dam is located upstream and within close proximity of a densely populated major metropolitan area. Sacramento lies 25 miles west of the dam. Other communities, including Folsom, Orangevale, Fair Oaks, Carmichael, Gold River, El Dorado Hills, and Rancho Cordova, lie ~~immediately~~ downstream of the dam (Figure 1-3). In the event of a dam breach or failure, extensive damage and adverse environmental effects can be expected to result within a short period of time.

As stated above, Folsom Dam Road was designed to provide access for operation and maintenance of the dam. As such, the road has been closed intermittently for dam rehabilitation and maintenance work. In addition, a spillway gate failure at the dam triggered a road closure in 1995 for immediate safety reasons and to allow the spillway to be repaired. Also in 1995, the Oklahoma City bombing caused the Federal Government to re-examine the vulnerability of all of its structures, and Folsom Dam Road was closed as an interim safety measure. In each of these cases, road closure ranged from a few days to several weeks.

Various security assessments were conducted at Folsom Dam, and Reclamation identified the risks associated with open public access to the dam structure. After September 11, 2001, however, Reclamation took additional measures to ensure the security of its facilities. Public access on Folsom Dam Road was limited to cars and pickup trucks during daylight hours. Commercial vehicles, pedestrians, and bicycles were not permitted on the road, although the restriction on commercial vehicles was not actively enforced. Meanwhile, Reclamation began formulating a comprehensive long-term security response plan.

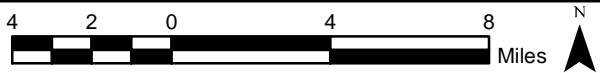
As part of the comprehensive security plan, Reclamation contracted with security experts at the Defense Threat Reduction Agency, Lawrence Livermore National Laboratories, and other private security firms to assess critical facilities including Folsom Dam for risk, vulnerability, and security. The independent security review concluded that uncontrolled access to the top of the dam, wing dams, and dikes constituted a clear and severe risk to the facility and to downstream communities, including Sacramento.

Reclamation analyzed recommendations received from the security assessment and decided to enhance security procedures and fortify facilities based on the associated risks. On February 28, 2003, Folsom Dam Road was closed pending a long-term decision regarding public access to the



Legend

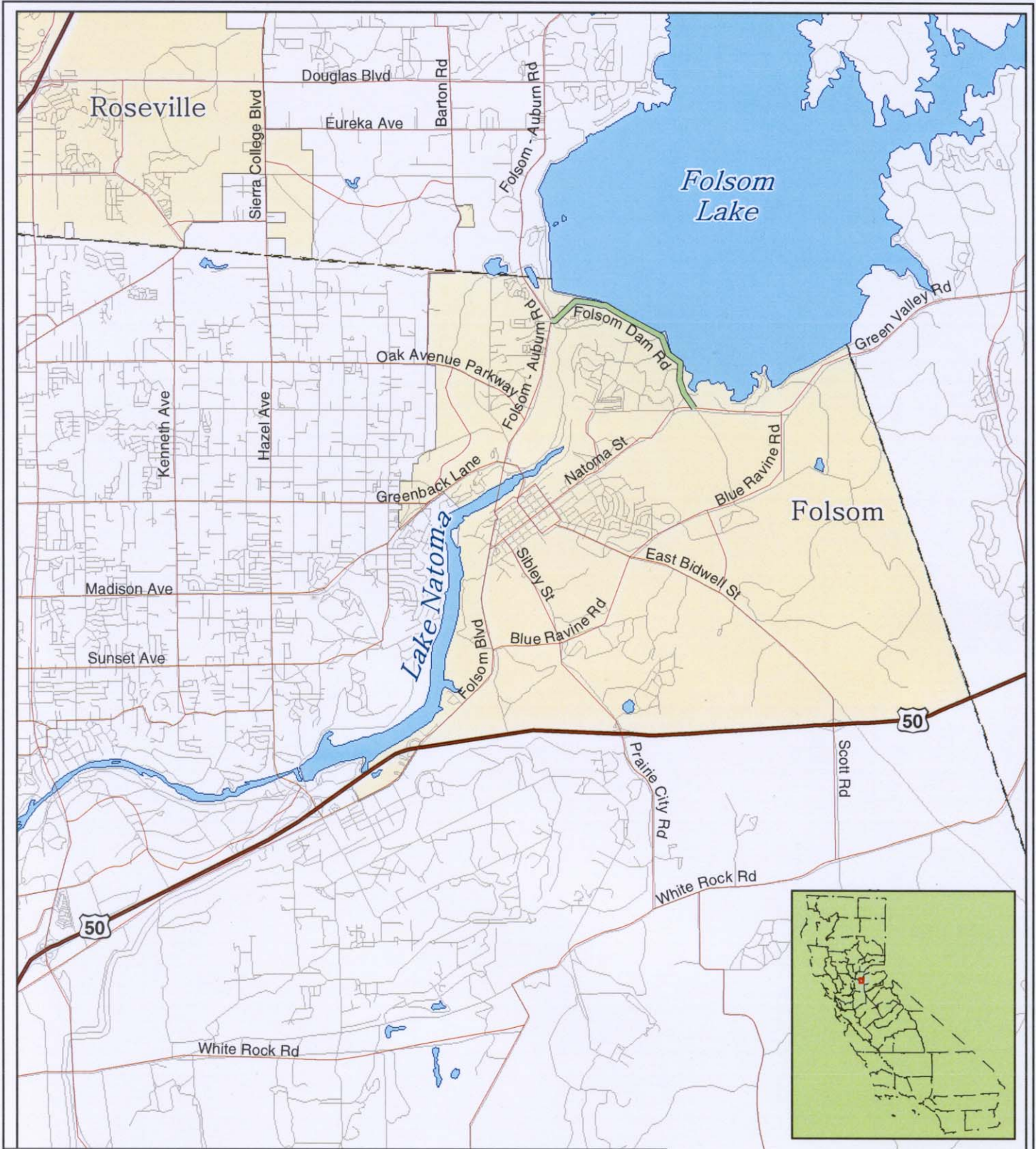
- Freeway or Primary Highway
- Primary road
- Secondary and connecting road
- Local road
- Road, major and minor categories unknown
- County Boundaries
- City Boundaries
- Water Bodies



Folsom Dam
Road Restriction EIS
18600807

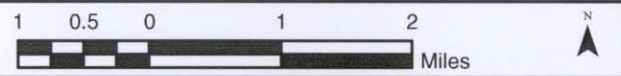
Regional Vicinity
Map

Figure
1-1



Legend

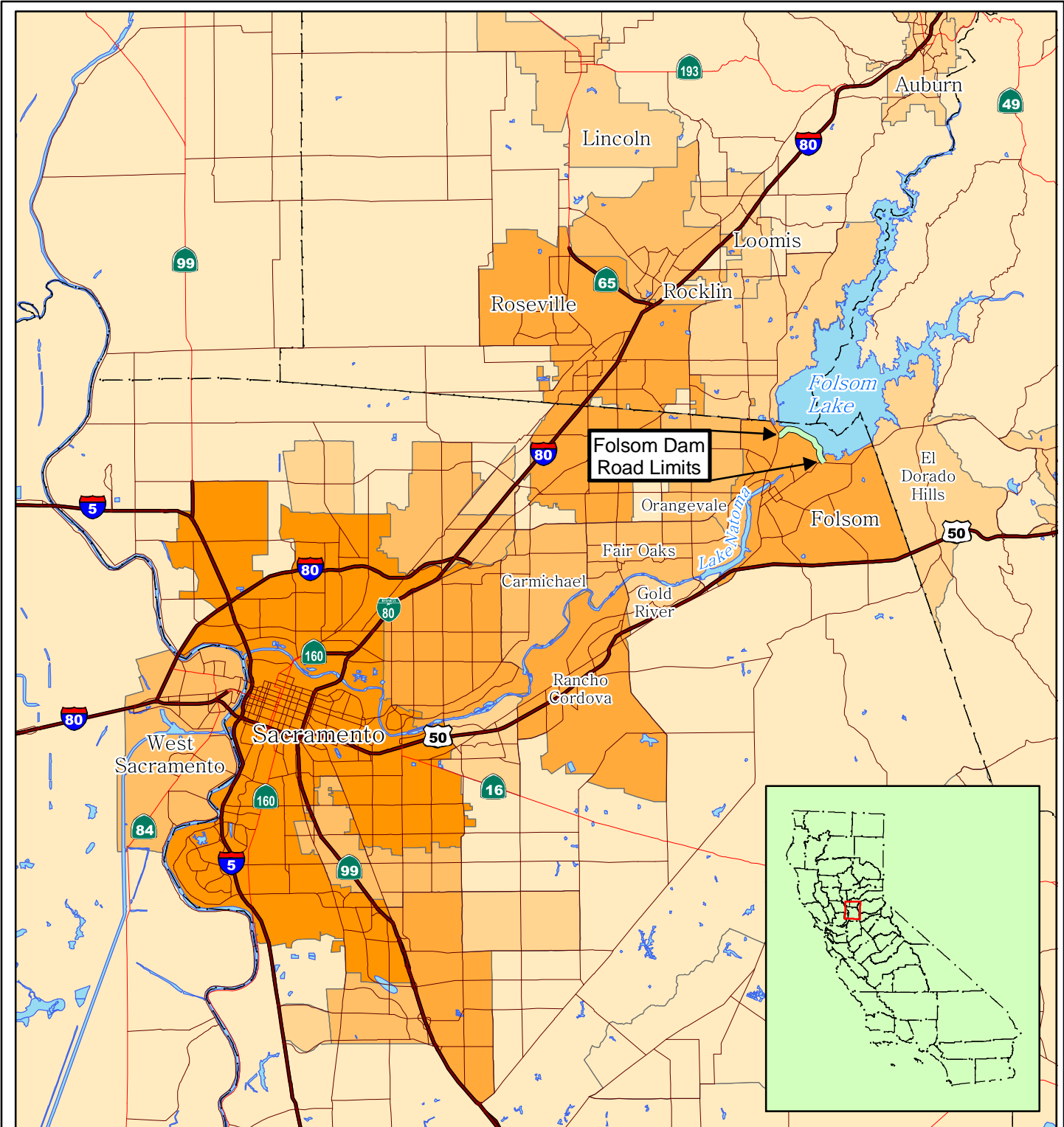
- Freeway or Primary Highway
- Primary road
- Secondary and connecting road
- Local road
- Road
- Water Bodies
- County Boundaries
- City Boundaries



Folsom Dam
Road Restriction EIS
18600807

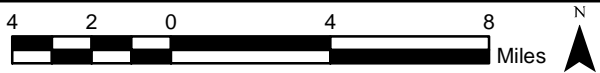
Local Vicinity Map

Figure
1-2



Legend

- | | | | |
|----------------------------|--|-------------------|-------------------------|
| Freeway or Primary Highway | Secondary and connecting road | County Boundaries | Total Population |
| Primary road | Local road | Water Bodies | 0 - 5,000 |
| | Road, major and minor categories unknown | | 5,001 - 25,000 |
| | | | 25,001 - 50,000 |
| | | | 50,001 - 100,000 |
| | | | 100,001 + |



Folsom Dam
Road Restriction EIS
18600807

Regional Population
Map

Figure
1-3

road. All motorized access to the dikes, wing dams, and Mormon Island Auxiliary Dam was disallowed. The indefinite closure of the road and associated dikes and wing dams was enacted by a Closure Order.

In addition to the short-term security measures, Reclamation continues to develop a comprehensive, long-term security plan. Key elements of the plan include a long-term solution for the future of vehicular access on Folsom Dam Road. That is the subject of this EIS. Separately, Reclamation is identifying other measures and policies that will enhance security and fortify facilities. Such measures may include fencing, screening, increasing the number of security personnel, and further limiting access to facilities.

1.2.3 Public Use of Folsom Dam Road Prior to Closure

Folsom Lake, Folsom Dam, and Lake Natoma form a substantial geographic barrier within the community of Folsom. Prior to the Folsom Dam Road closure in 2003, only three roadways crossed these features: Folsom Dam Road, Rainbow Bridge (Riley Street crossing), and the recently completed Lake Natoma Crossing (Folsom Street crossing). Folsom Dam Road provided the most northeasterly of these crossings. It also provided a route drivers could use to avoid downtown Folsom, especially during commute hours.

Significant growth in Folsom as well as in nearby Sierra Foothill communities has been a source of increased vehicular traffic through Folsom, particularly on Folsom Dam Road. The City of Folsom nearly doubled in population, from 29,600 to 57,200, between 1990 and 2001 (SACOG 2002a). Placer County, whose southern communities are in the vicinity of Folsom Dam Road, is one of the fastest-growing counties in the nation, with a growth rate of nearly 48 percent between 1990 and 2001. As residential and commercial growth have hit record highs throughout the area, vehicular traffic in Sacramento, El Dorado, and Placer counties has also increased. Nearly 18,000 vehicles crossed Folsom Dam Road on a daily basis before its closure in February 2003. Increased public use of Folsom Dam Road also requires that Reclamation allocate additional resources to the upkeep and maintenance of the road.

For measurement and planning purposes, traffic flow is evaluated in terms of Level of Service (LOS) ratings. “A” represents the best or free-flow conditions, and “F” represents substantial congestion and delay (Figure 1-4). According to its General Plan (~~1995~~1988, as amended through 1993), the City of Folsom aims to achieve an LOS of C, which translates to moderate traffic congestion where average vehicle speeds can continue to be near motorists’ desired speed for two- to four-lane roads. Many Folsom roads and intersections operated at levels below LOS C prior to 2003. These include the Rainbow Bridge, the Lake Natoma Crossing, Folsom Boulevard, Folsom-Auburn Road, and Natoma and East Natoma Streets.

1.3 POST-CLOSURE ACTIONS

The indefinite closure of Folsom Dam Road in February 2003 was an immediate response to the security concerns identified as part of the 2002 investigation. In addition, Reclamation began developing a long-term comprehensive security plan to address security needs at various facilities. Preparation of this EIS under the National Environmental Policy Act (NEPA) is part of the process of creating a security plan for Folsom Dam. Actions such as fencing and

screening in the vicinity have been implemented; other security measures relating to dam protection may also be undertaken.

Since the closure of Folsom Dam Road eliminated one of the most direct access routes from the northern portion of Folsom to the southern edge of Orangevale, a number of passenger cars have diverted to longer alternate routes to get around the reservoir and across the American River and Lake Natoma. (Trucks were already not permitted on Folsom Dam Road, although the restriction was not enforced and they continued to use the road.) Traffic that had been using Folsom Dam Road diverted to Rainbow Bridge and the Lake Natoma Crossing. Increased congestion, in terms of decreased levels of service, has occurred on other alternate routes including the following:

- Folsom Boulevard/Folsom-Auburn Road/Riley Street/Greenback Lane intersection
- Folsom Boulevard
- Folsom-Auburn Road
- Local streets within the City of Folsom

When the indefinite decision to close Folsom Dam Road was made in February 2003, Reclamation notified the public and local governments. The City of Folsom opposed the action because of concerns about new traffic patterns that were resulting from the closure, particularly in the city's historic district and adjacent neighborhoods. The City of Folsom recommended that Reclamation reconsider the security threat and identify alternative means of allowing restricted or controlled traffic use on the road. Meanwhile, the city developed and implemented the Folsom Historic District Traffic Calming Program, which closed or limited traffic on selected roadways in the city. Traffic signal timing changes and turn-pocket modifications were also implemented in an attempt to improve traffic flows. While the program received support from residents of streets that experienced increased traffic volumes in the immediate aftermath of the Folsom Dam Road closure, other residents voiced concerns during the scoping process of this EIS that the program has further limited access to businesses in the area.







As a result of some of these actions, a group that includes the City of Folsom, the City of Sacramento, the City of Rancho Cordova, Sacramento County, and the California Highway Patrol is devising and proposing a traffic management plan for Folsom Dam Road that could alternatively meet security requirements.

With the Folsom Dam Road closure and the subsequent changes to roadways in the area, the two intersections at either end of Folsom Dam Road have shown improved operations, as would be expected, due to the substantial reduction of traffic on the intersection legs toward the dam. The operations of the Riley Street/Scott Street, Riley Street/Sutter Street, and Natoma Street/Coloma Street intersections improved after the city implemented its traffic diversion plan. The intersections of Folsom-Auburn Road/Oak Avenue Parkway, Folsom-Auburn Road/Greenback Lane, and Riley Street/~~East~~ Natoma Street have operated at unacceptable levels during peak periods both with the road closure and the city's traffic calming program.

After the closure and diversions, traffic on Folsom-Auburn Road increased by approximately 8,000 vehicles per day. In addition, the closure contributed to an increase of approximately 9,000

LEVELS OF SERVICE

Representative of Multi-Lane Roadways and Highways

Level of Service	Flow Conditions	Technical Descriptions
A		Highest level of service. Traffic flows freely with little or no restrictions on maneuverability. No delays
B		Traffic flows freely, but drivers have slightly less freedom to maneuver. No delays
C		Density becomes noticeable with ability to maneuver limited by other vehicles. Minimal delays
D		Speed and ability to maneuver is severely restricted by increasing density of vehicles. Minimal delays
E		Unstable traffic flow. Speeds vary greatly and are unpredictable. Minimal delays
F		Traffic flow is unstable, with brief periods of movement followed by forced stops. Significant delays

Source: Modified diagram based on Highway Capacity Manual, LOS Criteria

Folsom Dam Road
Restriction EIS

Diagram of Level of Service (LOS) for
Multi-Lane Roadways

Figure
1-4

vehicles per day over Rainbow Bridge and the Lake Natoma Crossing combined. LOS F operations currently exist on segments of Folsom-Auburn Road, Rainbow Bridge, and Natoma Street.

This page intentionally left blank.

2.1 PROCESS USED TO FORMULATE ALTERNATIVES

2.1.1 Identification of Alternatives for Analysis

The identification, consideration, and analysis of reasonable alternatives are key to the National Environmental Policy Act (NEPA) process and important to the environmental evaluation process. Consideration of alternatives leads to a solution that satisfies the stated purpose and need and protects environmental and community resources.

Four alternatives are analyzed as part of this Environmental Impact Statement (EIS): the No Action Alternative; two restricted access alternatives that involve partially opening Folsom Dam Road to public use, one of which is identified as the Preferred Alternative¹, ~~or the alternative that Reclamation currently believes would best fulfill its statutory mission and responsibilities;~~ and the continued long-term closure of Folsom Dam Road. The No Action Alternative would involve restoring public access on Folsom Dam Road to pre-February 2003 conditions. This alternative serves as a baseline against which the other alternatives are compared. Each of the alternatives considered and analyzed is described in detail below.

2.1.2 Operational Constraints

Any alternative that recommends even partially opening Folsom Dam Road to public use must take into account operational conditions and constraints. As noted in Section 1.2, Folsom Dam Road provides direct access to an industrial complex that houses Reclamation and California Department of Parks and Recreation staff. Personnel located at the complex have local and regional responsibilities. Increasing traffic on Folsom Dam Road as a result of continued growth in the area causes delays and impedes the staff's ability to fulfill their responsibilities in a timely manner. At a minimum, any alternative that reopens Folsom Dam Road for public use must allow for periodic closures of the road so that scheduled dam-related operations and maintenance work can occur without difficulty.

Planning and cost constraints are associated with the partial or complete opening of Folsom Dam Road to public use. Opening the road would reintroduce the risk of liabilities to Reclamation from accidents on the road. It would also place the responsibility of maintaining the road on Reclamation. As the road was not originally designed for public use, road maintenance and repair was not previously anticipated as a recurring cost to Reclamation. Because road repair is a public safety issue when the road is open for public use, its timing and cost can take precedence over dam maintenance activities. Thus, reopening the road can affect the scheduling and budget allocations for dam-related activities. Over the four years preceding the road closure, Reclamation determined that the average annual cost of road maintenance was approximately \$54,000~~\$75,000~~. The City of Folsom has committed to bear all capital, operational, and maintenance costs associated with implementation of any restricted access

¹ Under NEPA, the Lead Agency must identify a Preferred Alternative if it believes that an alternative best meets its statutory mission and responsibilities, giving consideration to economic, environmental, technical and other factors. The Preferred Alternative is not necessarily the environmentally preferable alternative, nor is it the alternative that would necessarily be selected in the Record of Decision.

~~alternative. Assignment of costs would have to be negotiated between the City of Folsom and Reclamation before the road could be reopened.~~

Reopening Folsom Dam Road to the public would require security measures to be in place to minimize risk to public safety. Under the No Action Alternative, restrictions that existed prior to February 2003 would be reinstated. These would include limits on vehicle size and restrictions on pedestrian and bicycle access. Under the Preferred Alternative—Restricted Access Alternative 2 and Restricted Access Alternative 3, these limitations would also apply. Additional security measures would also be put in place to minimize security risks, in accordance with Reclamation’s core mission and responsibility. The number of vehicles able to access Folsom Dam Road would also be controlled under each of the action alternatives.

All alternatives would continue to allow access for emergency response, as necessary. Reclamation has had discussions with the City of Folsom’s fire and police departments to establish appropriate procedures for allowing emergency road access.

2.2 ALTERNATIVES CONSIDERED IN DETAIL

A comparison of alternatives is presented in Table 2-1. No Action is an alternative that is required for evaluation under NEPA. The Preferred Alternative—Restricted Access Alternative 2 and Restricted Access Alternative 3 were proposed by the City of Folsom. The Long-Term Closure Alternative was identified by Reclamation. The individual alternatives are described in more detail below.

**Table 2-1
Comparison of Alternatives**

	No Action Alternative	Preferred Alternative—Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
Days Open¹	7 days/week	Monday–Friday	Monday–Friday	None
Hours Open²	24 hours	3-hour peak periods, both AM and PM (e.g. 6–9 AM, 4–7 PM)	2-hour peak periods, both AM and PM (e.g. 6–8 AM, 4–6 PM)	None
Traffic Directional Flow³	Two-way	Two-way	One-way	None
Vehicle Restrictions⁴	Passenger cars, motorcycles, trucks under 5.75 tons (11,500 pounds) gross weight only	Passenger cars, motorcycles, and non-commercial pickups only	Passenger cars, motorcycles, and noncommercial pickups only	No public access
Desired Hourly Volume⁵	Not restricted	Proposed at 1,500 vehicles per hour, both directions (for purposes of analysis, 960 cars per hour in the peak direction was assumed) ⁶	500 vehicles per hour	None

Table 2-1, concluded

	No Action Alternative	Preferred Alternative— Restricted Access Alternative 2	Restricted Access Alternative 3	Long-Term Closure Alternative
Screening/ Inspection	Relatively unrestricted access across Folsom Dam Road. Lowest level of screening and security.	Folsom Dam Road access by permit only. Permits available through prescreening application. Vehicles must pass through permit checkpoint and be subject to inspection. Alternative provides for denial of access, but uninspected cars can access dam facility.	Same as the Preferred Alternative—Restricted Access Alternative 2	No public access. Highest level of security with respect to eliminating vehicle-related threats on Folsom Dam Road.
Consistency with Purpose and Need	This alternative does not meet the purpose and need.	The Preferred Alternative—Restricted Access Alternative 2 controls access, reduces risks, and increases safety compared to the No Action Alternative. <u>This alternative provides an acceptable level of security to allow restricted or controlled access along Folsom Dam Road.</u> It is consistent with the purpose and need, but does not minimize the risk or maximize safety in comparison to the other action alternatives	<u>Alternative 3 controls access, reduces risks, and increases safety compared to the No Action Alternative.</u> <u>This alternative also provides an acceptable level of security to allow restricted or controlled access along Folsom Dam Road.</u> It is consistent with the purpose and need. further reduces risk (compared with Alternative 2 and the No Action Alternative). It is consistent with the purpose and need.	The Long-Term Closure Alternative meets the purpose and need.

¹ Days open refers to the days of a typical week in which the road would be open to public traffic. Federal holidays are excluded. Reclamation would retain the right to deny access for overriding considerations, which include but are not limited to: elevated Department of Homeland Security threat levels, routine maintenance, construction of flood control improvements, etc.

² Hours open refers to the hours of a typical day in which the road would be open to public traffic. Conditions that pertain to days of operation also apply to hours of operation if necessary.

³ Directional flow refers to the direction of travel permitted during periods in which the road is open to traffic. Under Alternative 3, traffic would flow in the northbound direction only during the morning peak period and in the southbound direction only in the evening peak period.

⁴ Vehicle restrictions refer to the general types of vehicles that would be permitted to travel across the dam. Vehicles that do not match the criteria would be denied access and would need to seek an alternative route. No commercial vehicles, buses, recreational vehicles or towed trailers would be allowed access.

⁵ Hourly volume refers to the desired service level in terms of vehicles per hour. Because of the constraints of required vehicle inspection, the achievable flow of traffic would depend on the rate of inspection assumed and the number of inspection lanes in each direction.

⁶ For purposes of analyzing Restricted Access Alternative 2, a one-way directional split was assumed for the peak traffic flow direction. A rate of 960 vehicles per hour was used for the peak direction flow because with inspection-related traffic delays, processing more than 1,000 vehicles per hour on a single-lane road would be infeasible. If every vehicle were inspected with an average delay of no more than 30 seconds per vehicle, eight inspection stations could achieve 960 vehicles per hour. This one-way directional flow was therefore used to represent a reasonable upper limit to the maximum traffic volume that could be achieved.

2.2.1 No Action Alternative

The No Action Alternative would consist of reopening Folsom Dam Road to provide access at pre-February 2003 levels, prior to the indefinite road closure. No major physical alteration of the road or additional restrictions on traffic flow would be undertaken. Traffic would be allowed on the road 7 days per week, 24 hours per day. The pre-February 2003 restrictions, including “no stopping” signage and vehicle weight restrictions, would be reinstated.² Pre-February 2003 security patrols would be reinstated. This alternative has no provision for traffic control devices or traffic management procedures associated with access to or exit from the industrial complex that houses the operations and maintenance facilities of the dam. Therefore, periodic temporary, short-term road closures, as occurred before February 2003, would be needed during high security times and for routine and/or emergency dam maintenance activities and construction of flood control improvements.

This alternative allows relatively unrestricted access to and across the dam. As a result, this alternative presents the greatest security risk from vehicular access to the dam facility. Under this alternative, Federal, State, and contract personnel will experience delays getting into or out of the industrial complex at the dam. Increasing traffic due to public use of Folsom Dam Road will also increase the burden on Reclamation to provide road repair and maintenance services.³ Implementing this alternative raises the risk of accident-related liabilities for Reclamation.

Reclamation has identified the No Action Alternative as the environmentally preferable alternative; however, allowing unrestricted access along Folsom Dam Road does not meet Reclamation’s purpose and need for minimizing security risks and maximizing safety of the dam and downstream areas. In the event of a dam failure, all resources evaluated in this EIS would experience severe environmental consequences.

2.2.2 Preferred Alternative—Restricted Access Alternative 2

The Preferred Alternative—Restricted Access Alternative 2 is the alternative that Reclamation believes would fulfill its statutory mission and responsibilities and provide the greatest measure of public safety, giving consideration to economic, environmental, technical and other factors. The concept of the “preferred alternative” is different from the “environmentally preferable alternative” (identified as the No Action Alternative in Section 2.2.1), although in some cases one alternative may be both. It is identified so that agencies and the public can understand the lead agency’s orientation. Section 1502.14(e) of the Council on Environmental Quality Regulations requires the section of the EIS on alternatives to “identify the agency’s preferred alternative if one or more exists, in the draft statement, and identify such alternative in the final statement.” This means that if the agency has a preferred alternative at the Draft EIS stage, that alternative must be labeled or identified as such in the Draft EIS. In the Final EIS, a Preferred Alternative must be designated.

² Although restrictions on trucks and commercial vehicles were in place prior to the February 2003 road closure, the enforcement of those restrictions had been at issue. Under the No Action Alternative, it is assumed that the restrictions would be reinstated and enforced.

³ Based on information from Reclamation’s automated maintenance management system (MAXIMO), the direct cost of these responsibilities is estimated at \$75,000 annually. Repaving the road, which would be necessary in advance of reopening the road, is expected to cost approximately \$1 million.

The City of Folsom originally proposed three alternatives with input from other potentially affected cities, counties, and State agencies. Two of the three proposed alternatives were advanced for further evaluation in this EIS and are described in this section and Section 2.2.3. In addition to the design features analyzed in this document, each of the alternatives may include options such as access restrictions based on size, type of vehicle, or other control measures.

The City of Folsom’s objective is to achieve a limited, temporary reopening of Folsom Dam Road until a new bridge parallel to Folsom Dam Road can be constructed and opened to traffic (anticipated for completion in 2007/2008; see Sections 2.3 and 3.11.2). The city’s proposed alternatives would involve a system of additional traffic control and security measures implemented by affected jurisdictions to address potential risks to Reclamation facilities from allowing access to Folsom Dam Road. Selection and implementation of a restricted access alternative requires a designated access traffic lane and traffic controls that allow unimpeded access for official purposes into and out of Reclamation’s Folsom Dam Industrial Complex. The City of Folsom has committed to bear all capital, operational, and maintenance costs associated with implementation of any restricted access alternative.

Under any alternative that involves public access to Folsom Dam Road, a security review would be required of every vehicle using the road. While the exact nature and design of the inspection has not been defined, this requirement would impede traffic flow, causing a delay in travel time and limiting the overall capacity of Folsom Dam Road to carry traffic. To reduce delays, either multiple inspection facilities would be required to process a higher volume of traffic, or the average time required to inspect vehicles would have to be minimized. Table 2-2 shows how longer delays due to an inspection process would restrict the number of vehicles that can cross the road, even with multiple inspection facilities.

**Table 2-2
Relationship of Roadway Capacity and Delay**

Inspection Delay per Lane (minutes:seconds)	Number of Inspection Lanes		
	1 Lane	2 Lanes	3 Lanes
	Roadway Capacity (vehicles per lane per hour)		
0:00	1,000	NA	NA
0:15	240	480	720
0:30	120	240	360
0:45	80	160	240
1:00	60	120	180
1:15	48	96	144
1:30	40	80	120
1:45	34	69	103
2:00	30	60	90

Source: City of Folsom submittal to Reclamation, August 2004

Table 2-2 shows that a road’s capacity to carry traffic declines relatively quickly with increased delay. For example, on a one-lane roadway, a delay of 15 seconds per vehicle reduces the road’s capacity from 1,000 vehicles per hour to 240 vehicles per hour. Increasing the delay from 15 to 30 seconds reduces the road’s capacity again by half, from 240 to 120 vehicles per hour. Adding

a second or third lane increases the roadway's capacity, but if longer delays occur (on the average of 1.5 to 2 minutes per vehicle), the addition of inspection lanes would not substantially increase traffic capacity. In general, Table 2-2 indicates that average delay times of 30 to 45 seconds or greater per vehicle begin to substantially limit roadway capacity unless lanes are added or the average delay time per vehicle is reduced.

The City of Folsom developed conceptual security measures that were proposed to Reclamation as a possible means of providing restricted use of Folsom Dam Road. As proposed, the security measures include establishing a coordinated or linked information board on both East Natoma Street and Folsom-Auburn Road near their existing intersections with Folsom Dam Road. These message boards would notify drivers whether the road is open (see "Hours Open" in Table 2-1) or provide other traffic information that might assist drivers in deciding whether to take Folsom Dam Road or another route. Drivers turning from either Folsom-Auburn Road or East Natoma Street onto Folsom Dam Road would approach a checkpoint zone where their vehicles would be subject to inspection. Once passed or cleared through this zone, vehicles would proceed along Folsom Dam Road to the other end.

A key element of the City of Folsom's proposal is the requirement for permits or prescreening for all vehicles that use Folsom Dam Road. Drivers would have to apply beforehand for a permit that would be permanently affixed to their vehicles, and only those vehicles clearly displaying the permit would be allowed access to Folsom Dam Road through the inspection system. Vehicles not displaying a permit would be immediately turned back and denied access. Permitted vehicles would pass through an area where inspection personnel could see the vehicle and driver. These vehicles would be subject to being stopped for additional inspection at the discretion of the inspection staff or at random. The objective of the city's proposed inspection process is to allow greater access across the dam and to maximize traffic flow and efficiency while providing the opportunity to impose denial of access to any vehicle. In achieving this objective, the proposed permit system for the Preferred Alternative—Restricted Access Alternative 2 would allow for permitted but uninspected vehicles (subject to inspection, but not necessarily inspected each trip) to access and cross Folsom Dam Road. The city's proposed system is based on restricting vehicle size, type, and weight loads combined with the permit system and random inspection to minimize risk.

The conceptual elements of the City of Folsom's proposed security measures include the following:

- Allow permit-only access to previously cleared drivers and vehicles
- Restrict vehicle size, types, and weight loads
- Install and operate inspection facilities at the entrances to the facility staffed by law enforcement personnel
- Install barriers or systems that can be activated as necessary to restrict or prevent access or egress at the facility
- Conduct random vehicle searches at inspection facilities
- Employ latest search technology
- Provide rapid-response tow service to immediately clear stalled vehicles

- Increase surveillance and communication at the facility
- Install emergency access systems for police and fire vehicles
- Close Folsom Dam Road for necessary maintenance and flood protection improvements and in response to specific threats

Construction of security and inspection facilities would be required for the Preferred Alternative—Restricted Access Alternative 2. The City of Folsom proposes that these facilities would be temporary and could be removed when traffic can be diverted permanently to the proposed ~~Folsom Dam Bypass~~ Folsom Bridge Project. The inspection facilities, associated turning and holding lanes, and other related facilities would require an area of not more than one acre at each end of Folsom Dam Road. Selection and implementation of a restricted access alternative requires a designated access traffic lane and traffic controls that allow unimpeded access for official purposes into and out of Reclamation's Folsom Dam Industrial Complex. Inspection facilities would be established at each end of the road to provide for traffic flow in each direction. The inspection facilities would be approximately 75 to 100 feet wide and 300 to 400 feet long, although exact dimensions and layouts have not been estimated. The inspection and security facilities would be located on or adjacent to existing road alignments, and other elements including turning lanes and signage would be located on or immediately adjacent to existing roads or rights-of-way. It is expected that the facilities could be installed without impacting existing structures.

A potential exists for traffic to build up while waiting to pass through the inspection facilities. The city estimates that traffic queues from Folsom Dam Road onto either Folsom-Auburn Road or East Natoma Street, if or when they occur, could be accommodated within or adjacent to existing roadway facilities without requiring any additional improvements (such as pavement widening).

Certain costs would be associated with the construction of inspection facilities. ~~Additional environmental review and permitting requirements would also likely be associated with these alternatives.~~ These additional costs are associated with security and with annual repair and maintenance of the road and its related facilities. The City of Folsom has committed to bear all capital, operational, and maintenance costs associated with implementation of any restricted access alternative. ~~Final assignment of costs would probably depend on a formal negotiated agreement between the City of Folsom and Reclamation in the event this alternative is adopted.~~

This alternative ~~minimizes~~ reduces risks to Folsom Dam facilities compared to the No Action Alternative and therefore meets Reclamation's purpose and need. This alternative does not eliminate or address all risks to the facility; it only affects potential risks related to vehicular use of Folsom Dam Road, which is the subject of this EIS.

Identification of this Preferred Alternative for purposes of the ~~Draft Final~~ Final EIS does not foreclose the option of selecting, in the ~~Final EIS and ROD~~, a full closure of Folsom Dam Road. Reclamation has identified potential environmental, economic, and quality of life effects of the Preferred Alternative—Restricted Access Alternative 2 that may occur before the new bridge over the American River can be opened to traffic.

2.2.3 Restricted Access Alternative 3

Restricted Access Alternative 3 would also fulfill the City of Folsom’s objective to achieve a limited, temporary reopening of Folsom Dam Road until a new bridge parallel to Folsom Dam Road is operational. As with the Preferred Alternative—Restricted Access Alternative 2, additional traffic controls and security measures would be implemented to address potential risks to Reclamation facilities from allowing access to Folsom Dam Road. These traffic controls and security measures would be essentially the same as those described for the Preferred Alternative—Restricted Access Alternative 2 in Section 2.2.2. The main differences between the two alternatives are in the hours that each one would allow public access to Folsom Dam Road, the directional flow of traffic on the roadway, and the number of vehicles per hour that would be accommodated under each alternative (see Table 2-1). Due to these differences, the size and configuration of the inspection facilities under each alternative could vary, depending on the number of inspection lanes and stations needed to process maximum feasible traffic volumes and maintain a security level that is acceptable to Reclamation (see Table 2-1, footnote 6, and Section 2.2.2). The configuration of inspection facilities would be designed following the selection of an alternative in the Record of Decision.

Restricted Access Alternative 3 also ~~minimizes~~ reduces risks to Folsom Dam facilities compared to the No Action Alternative and therefore meets Reclamation’s purpose and need. Restricted Access Alternative 3 further reduces risks in comparison to the Preferred Alternative—Restricted Access Alternative 2. This alternative does not eliminate or address all risks to the facility; it only affects potential risks related to vehicular use of Folsom Dam Road.

2.2.4 Long-Term Closure Alternative

The Long-Term Closure Alternative would constitute a long-term closure of Folsom Dam Road between Folsom-Auburn Road and East Natoma Street to restrict public access. Essentially, the current road closure would be continued permanently. Only authorized Reclamation, law enforcement, and emergency response vehicles would be permitted on Folsom Dam Road for maintenance, security reasons, or emergency access/passage. This alternative provides for the greatest level of risk reduction and security with respect to reducing a threat related to access along Folsom Dam Road. This alternative does not eliminate or address all risks to the facility; it only affects potential risks related to vehicular use of Folsom Dam Road, which is the subject of this EIS.

2.3 ALTERNATIVES CONSIDERED AND ELIMINATED FROM DETAILED STUDY

2.3.1 Restricted Access Alternative 1

One alternative forwarded to Reclamation by the City of Folsom was considered but eliminated from detailed study. Scenario 1, similar to the Preferred Alternative—Restricted Access Alternative 2 and Restricted Access Alternative 3 described above, proposed to open the road to public traffic on a controlled basis with vehicle inspection. Scenario 1 proposed to allow two-way public access for passenger cars, motorcycles, and noncommercial pickup trucks 7 days per week for 3-hour peak commute travel times Monday through Friday and 9 AM to 5 PM on Saturday and Sundays, with a maximum volume of 2,000 vehicles per hour. Reclamation

considered and rejected this alternative as not meeting the purpose and need because it would not allow for the increased security necessary to minimize risk to the facility.

2.3.2 New American River Bridge Alternative

Another alternative recommended by the City of Folsom and reviewed by Reclamation was the construction of a bridge parallel to Folsom Dam Road. The Folsom Dam Road Access Restriction is the result of Reclamation's determination that continued access across Folsom Dam Road poses an unacceptable risk. The purpose and need of this action, as stated in Section 1.1, is to control access to Folsom Dam, including all traffic on Folsom Dam Road, and to minimize the security risks and maximize safety to downstream areas. Although a bridge parallel to Folsom Dam Road would provide additional traffic capacity, it would not address the basic purpose and need of controlling access to the dam facility. It was therefore not considered as an alternative. Although a bridge below Folsom Dam has been considered in the past, including as an alternative to the Lake Natoma Crossing completed in 1999, it has not proceeded to the stage of more detailed preliminary design and environmental review until recently. Since the initiation of the NEPA review process for the Folsom Dam Road Access Restriction, the U.S. Army Corps of Engineers has begun a separate and independent project to evaluate another crossing of the American River (referred to as the ~~Folsom Dam Bypass~~ Folsom Bridge Project). The ~~Folsom Dam Bypass~~ Folsom Bridge Project is discussed further in Sections 3.1 and 3.11.2.

2.3.3 Bicycle and Pedestrian Access Alternative

A third alternative considered but not advanced for review was allowing bicycle and pedestrian access on the road. Reclamation did not allow pedestrians and bicycles on Folsom Dam Road before February 2003. After conducting security reviews of the facility, Reclamation has determined that any uncontrolled public access, including pedestrian and bicycle access on Folsom Dam Road, would pose an unacceptable security risk. Therefore, allowing bicycle and pedestrian access on Folsom Dam Road is not a viable alternative.

This page intentionally left blank.