### Rail Element

In September 2012, the State Transportation Board adopted the Nevada State Rail Plan. The Plan is incorporated here by reference, and summarized below.

## State Rail Plan, Summary and Recommendations

The State Rail Plan provides the state with a plan for implementing passenger and freight rail service improvements, guiding multistate initiatives, and fulfilling requirements of the 2008 federal Passenger Rail Investment and Improvement Act. The plan has a multimodal passenger and intermodal freight focus designed to be compatible with highway, air, and transit modes operating in and through the state. It is important to note that Amtrak and private operators, notably Union Pacific Railroad, rather than NDOT, provide and fund passenger and freight rail services available in Nevada. Thus, as stated in the State Rail Plan, Nevada's role is one of supporting, coordinating, and enhancing services provided by these third-party owners/operators, rather than taking on the role of owning and operating its own rail facilities and services.

| Rail    | Advantages   |
|---------|--|
| General | Rail offers a highly sustainable form of transportation.   |
|         | It is an environmentally friendly and resource-sensitive method of moving goods and people.  |
|         | Rail provides connectivity to adjacent states and Mexico and linkages to major international transportation hubs (e.g., ports).  |
|         | It provides opportunities for stimulating economic growth and development.   |
|         | Expanding rail transportation can greatly enhance the state's transportation network.  |
| Freight | The diversion of truck traffic to rail frees highway capacity for passenger cars, reduces air pollution, conserves energy, and enhances traffic safety.  |
|         | Much of the freight movement in Nevada is through truck traffic that produces little direct economic benefit for the state, yet demands the state's resources to build and maintain Interstate and other highways. |
|         | Freight rail reduces emissions from tens of thousands of trucks traveling through the state daily.   |
|         | Carried by rail, freight does not drain the state's limited transportation funds, creates less pollution and greenhouse gases per ton mile, and uses less energy per ton mile.                                     |
|         | With rail transportation, the responsibility for infrastructure falls primarily to the private parties: railroads, and ultimately their customers.   |

| Rail      | Advantages   |
|-----------|--|
| Passenger | Passenger rail provides an alternative mode of travel for the state's residents.   |
|           | It allows the opportunity to focus growth in more sustainable development patterns.  |
|           | Passenger rail can supplement highway capacity, enhance traffic safety, and cut air pollution by reducing automobile travel.   |
|           | National transportation policies are moving to include rail as a high-priority transportation mode.  |
|           | Multimodal projects may have advantages over highway projects when competing for federal funds.  |
|           | The state should begin to take advantage of these new funding opportunities so that commuter rail, conventional intercity rail, and ultimately high-speed rail will all play a role in Nevada's transportation system. |

Source: Nevada State Rail Plan 2012

Recognizing how passenger and freight rail service supports a connected multimodal transportation system in Nevada, the recommendations and findings of the State Rail Plan have been incorporated by reference in the Connecting Nevada Plan. Rather than reiterate the study's findings, we recommend that those interested in the study review the document, which is available on the NDOT website (www.nevadadot.com, search for key words "rail plan").

Passenger rail in the United States is experiencing a renaissance of sorts, with various proposals for both high-speed and conventional intercity rail being developed throughout the nation. This is no exception in Nevada, where rail was discussed at stakeholder meetings in both Southern and Northern Nevada meetings.

Freight operations, while exclusively privately owned and operated in the state, serve a vital public purpose in moving freight that would otherwise have to travel by truck on the highway system, thereby degrading mobility, traffic safety, and the physical infrastructure. The State Rail Plan goals and objectives recognize that supporting further development of the rail system can improve safety, encourage economic development opportunities, and maximize the transportation system's efficiency by relieving congestion and improving connectivity between road, rail, and air.

The recommended projects included in the Nevada State Rail Plan involve a combination of private- and public-sector conventional and high-speed passenger rail, freight rail, excursion rail, and rail-highway grade crossing improvements to be made in the short-, mid-, and long-term.

The following key projects are included in the Nevada State Rail Plan for the next 5 years:

- X-Train conventional passenger rail service between Los Angeles and Las Vegas, a private company venture
- DesertXpress high-speed rail service between Las Vegas and southern California, a private company venture

- Union Pacific Railroad track enhancement project to upgrade the Weso crossover
- Union Pacific Railroad Phase 1 subsiding improvements Patrick and Rose Creek
- NDOT rail-highway grade-crossing improvements
- three excursion rail improvements: Nevada Northern Railway, Virginia & Truckee Railroad, and Nevada Southern Railway

The following key projects are included in the Nevada State Rail Plan for the 6-to-20-year timeline:

- passenger rail service for the Reno-Tahoe bid for the 2022 Winter Olympic Games
- consolidated multimodal terminals in Elko, Winnemucca, Sparks, Reno, Las Vegas, and Laughlin
- Northern and Southern Nevada inland port projects
- Union Pacific Railroad Phase 2 projects, including sub siding projects in Nevada (construct Oreanna, construct Valery, and extend Massie); Elko CTC improvements; Donner Pass improvements in California (which could enhance Nevada freight movements)
- White Pine (Nevada Northern Railway) shortline improvements
- Fallon transload facility relocation
- A rail-highway grade crossing improvement in Las Vegas

The following key projects are included in the Nevada State Rail Plan for the greater-than-20-year horizon:

- high-speed rail across Northern Nevada, serving Reno
- high-speed rail serving Las Vegas in Southern Nevada, linking with Los Angeles and Phoenix, potentially followed by other connections, such as Reno-Las Vegas
- high-speed rail passenger terminals, notably in Las Vegas

The above information was derived from the Summary Section of the State Rail Plan Report.

### Passenger Rail Potential Projects

The following information was derived from Chapter 3 of the State Rail Plan Report.

Conventional passenger rail improvements proposed for Northern Nevada:

- AMTRAK California Zephyr Improvements (most are already being implemented, studied, or will be implemented in the near future)
- Service between San Francisco, Sacramento, Salt Lake City, and Reno during proposed 2022 Reno-Tahoe Winter Olympic games, if the Reno-Tahoe Winter Games Coalition's bid is successful

Conventional passenger rail improvements proposed for Southern Nevada:

- X-Train (private project)
- Pullman Palace Car Train (private project)

### **High Speed Rail Facilities**

- DesertXpress
- California-Nevada Interstate Maglev
- Golden Triangle

### **Excursion Train Facilities**

• Three of Nevada's excursion railroads have expansion plans

# **Freight**

## **Connecting Nevada Freight Needs Assessment**

## **Existing Freight Infrastructure Profile**

Nevada's economy benefits from a robust freight transportation infrastructure that includes two interstate highways, major airports, and two transcontinental freight rail corridors. With no tax on inventories, the Reno-Sparks and Las Vegas-Henderson areas have manufacturing, warehousing, and distribution centers that rely on easy interstate highway connections to provide just-in-time deliveries to California and other states.

Fresh seafood, flowers, and other high-value items arrive by air daily at McCarran International Airport and the Reno-Tahoe International Airport for use at hotels and casinos. In addition to the leisure and hospitality and warehousing and distribution industries, mining plays a significant role in the state's economy. Employment in Nevada's hard rock mining industry is six times the national average. A robust rail and road system is essential for transporting ores and other mineral products.

This section provides a context for understand freight dynamics in Nevada. It identifies existing commodity flow patterns and describes existing freight activity centers. It also discusses the existing freight transportation infrastructure.

The Federal Highway Administration Freight Analysis Framework (FAF) Version 3 commodity flow database provides estimates of existing commodity flows to, from, within, and through Nevada. The database provides information both on the annual tonnage and annual values of commodity flows. Each measure provides a different perspective on how Nevada's freight infrastructure supports the state, regional, and national economies.

Table 2 summarizes the top 10 destinations for freight from Nevada. This summary includes truck, rail, and other truck-rail combination modes.

Table 2. Top 10 Destinations of Freight Flows from Nevada (2010)

| State      | Value<br>(\$ millions) | Volume<br>(thousands of tons) |
|------------|------------------------|-------------------------------|
| California | 11,764                 | 6,565                         |
| Utah       | 3,489                  | 1,909                         |
| Washington | 2,768                  | 1,857                         |
| Arizona    | 1,894                  | 1,088                         |
| Oregon     | 1,380                  | 377                           |
| Texas      | 1,217                  | 245                           |
| Colorado   | 984                    | 199                           |

Table 2. Top 10 Destinations of Freight Flows from Nevada (2010) (cont)

| State      |       | Value<br>(\$ millions) | Volume<br>(thousands of tons) |
|------------|-------|------------------------|-------------------------------|
| New York   |       | 724                    | 70                            |
| Michigan   |       | 679                    | 2,341                         |
| Illinois   |       | 665                    | 73                            |
| All others |       | 6,375                  | 2,594                         |
|            | Total | 31,939                 | 17,318                        |

Source: Freight Analysis Framework (2010)

Table 3 summarizes the top 10 origins for freight to Nevada. This summary includes truck, rail, and other truck-rail combination modes.

Table 3. Top 10 Origins of Freight Flows to Nevada (2010)

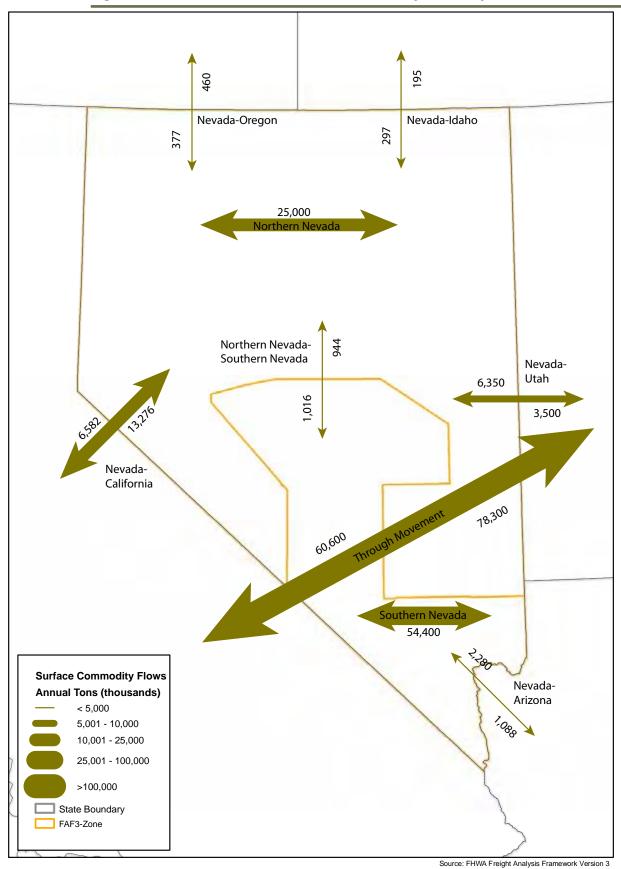
| State        |       | Value<br>(\$ millions) | Volume<br>(thousands of tons) |
|--------------|-------|------------------------|-------------------------------|
| California   |       | 23,989                 | 13,840                        |
| Arizona      |       | 4,209                  | 2,278                         |
| Utah         |       | 2,977                  | 6,355                         |
| Pennsylvania |       | 2,411                  | 328                           |
| Illinois     |       | 2,223                  | 380                           |
| Texas        |       | 2,210                  | 709                           |
| New York     |       | 1,959                  | 144                           |
| Ohio         |       | 1,685                  | 262                           |
| Michigan     |       | 1,669                  | 274                           |
| Washington   |       | 1,650                  | 889                           |
| All others   |       | 14,020                 | 8,561                         |
|              | Total | 59,002                 | 34,020                        |

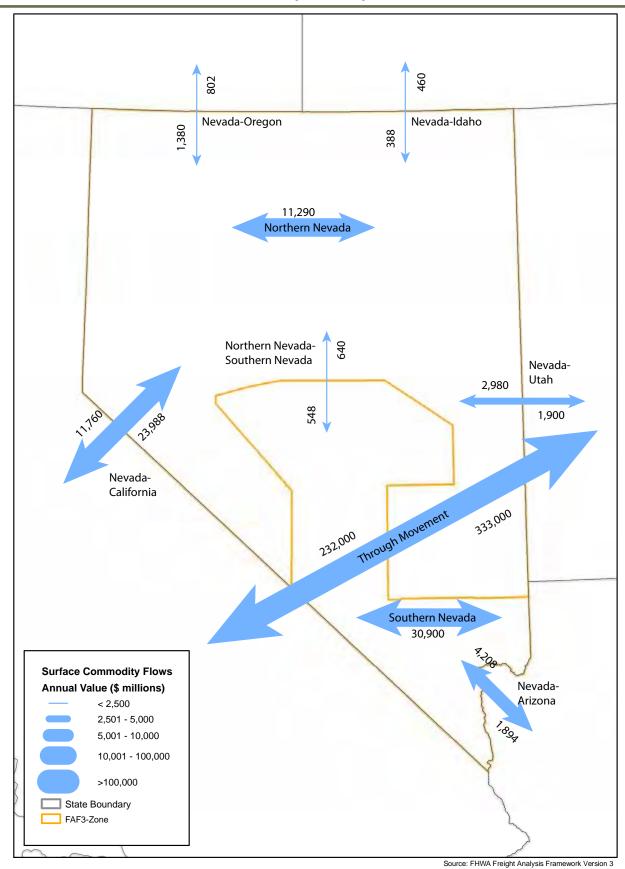
Source: Freight Analysis Framework (2010)

# **Existing SURFACE freight flows**

Figure 5 illustrates 2010 commodity volume moving by truck, rail, and other surface modes that include mail and combination truck-rail shipments. It shows commodity flows in thousands of annual tons. Nevada has two FAF analysis regions. The southern region includes Clark and Nye Counties. The northern region includes the remainder of the state. Figure 6 shows the value of commodities moving by truck, rail, and other modes. It shows interactions in millions of 2010 dollars.

Figure 5. Nevada's 2010 Surface Commodity Flows, by Ton





### Within Nevada

The 2010 commodity flow data show that freight interaction within Nevada is focused around its urban areas. With Reno and Las Vegas separated by more than 400 miles of high desert highway, only 3 percent of total intrastate freight activity moves between Northern and Southern Nevada. More than 97 percent of freight activity within the state occurs within each of these two FAF regions. By tonnage, bulk commodities such as nonmetal mineral products, gravel, and waste and scrap top the list of commodities moving within the state. By value, machinery and base metals top the list of intrastate commodity flows.

### California

Furthermore, the 2010 FAF data show that California is Nevada's largest interstate trading partner both in terms of the quantity and value of commodities shipped. The two states trade a broad range of goods. Pharmaceuticals and chemical products top the list of high-value shipments from Nevada to California. High-volume items from Nevada include sand and nonmetal mineral products. From California, electronics and mixed freight are the top commodities by value. By volume, nonmetal mineral products and other agricultural products are top imports into Nevada.

### Utah and Arizona

After California, exports of metallic ore from Nevada's mines and imports of coal made Utah the Silver State's second-largest trading partner in terms of annual tonnage. However, imports of electronics and pharmaceutical products gave Arizona the edge by overall value of trade. Food and nonmetallic minerals were other key imports from Arizona. Chemical products were Nevada's top export to Arizona in 2010.

### Oregon and Idaho

In 2010, Oregon and Idaho together accounted for almost 4 percent of the total interaction with neighboring states. Newsprint is the primary import from Oregon. The top commodity export from Nevada to Oregon is basic chemicals. Chemical products are the primary export from Nevada to Idaho, while foodstuffs are the primary import from Idaho.

### Through Nevada

California is Nevada's largest trading partner, but most of the commodities traveling on Nevada's roads and rails are passing through. By volume, over 50 percent of the freight moving in Nevada was long-distance interstate commerce between California ports, factories, and agricultural centers and markets in the Midwest and East Coast.

Opportunities to add value to these pass-through commodities are limited. Nevada would need to have a significant comparative advantage in labor costs, regulations, and tax structure to convince shippers to reorganize their supply chains so that commodities currently passing through the state are instead off-loaded and transferred. The Nevada economy would more likely benefit from increased through traffic by providing

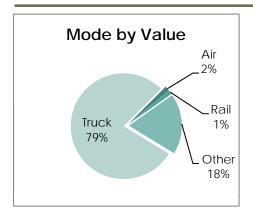
superior support services, such as truck stops and rest areas, and drayage and warehousing activities.

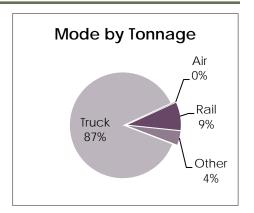
## **Existing Surface Freight Modes**

The transportation mode used to carry a particular commodity depends on factors of supply and demand such as shipment length, cost, frequency, shipment value, pick-up and delivery times, and special handling needs. Trucking dominates the short-haul freight market through its flexibility and cost characteristics. For many commodities traveling long distances, rail and combination truck-rail intermodal shipments are typically more cost-effective. Air cargo is primarily used for low-weight, small-volume, high-value shipments.

Not including through movements, trucks are the primary transportation mode for commodities moving to, from, and within Nevada. The 2010 FAF data show that 87 percent of these internal and internal-external, external-internal commodity flows by volume are moving by truck. Rail is the primary mode for heavy, bulk commodities such as metallic ore, coal, and other minerals. While air cargo amounts to 2 percent of the overall freight value, it is 0.09 percent of total freight volume. Figure 7 shows freight mode by volume and value for commodities moving to, from, and within the state.

Figure 7. Nevada Freight Mode, by Value and Tonnage





Note: "Other" modes include combination truck-rail and mail modes

The dominance of trucking in the short-haul market in Nevada and the use of rail modes for longer distance shipments are illustrated in Figures 8 and 9, next page. These figures show eastbound and westbound shipments between California and markets in the Midwest and East Coast. Eastbound flows are higher, reflecting California's exports of food and the volume of commodities imported from Pacific Rim countries transshipped through California's ports at Los Angeles, Long Beach, and Oakland. Westbound flows include exports to the Pacific Rim and other products shipped to California. The FAF data show that trucks have a larger share of these long-distance commodity flows than rail and other combination truck-rail modes.

Figure 8. 2010 Nevada Surface Freight Traffic, by Value

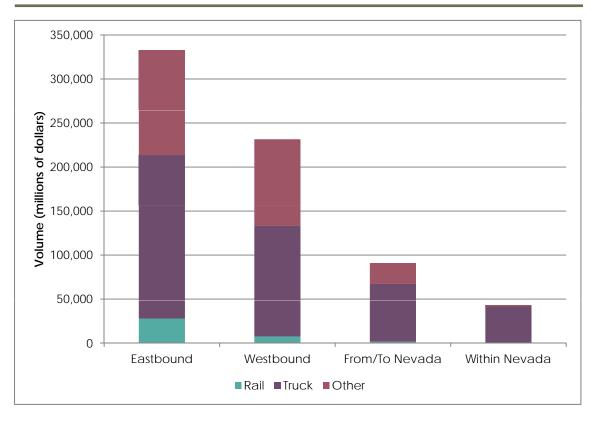
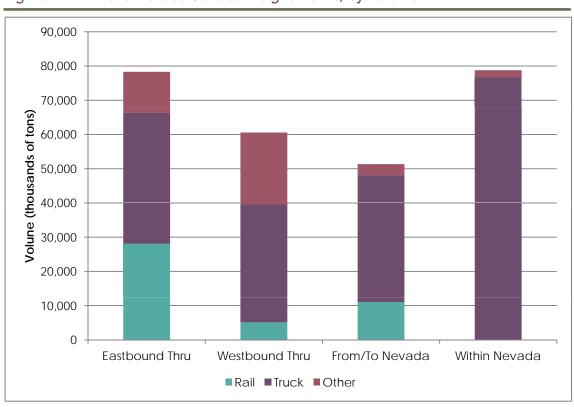


Figure 9. 2010 Nevada Surface Freight Traffic, by Volume



## **Existing Freight Activity Centers**

#### Urban Areas

Compared with other Nevada counties, Washoe County has the highest portion of the state's employment in manufacturing, warehousing, storage, and truck transportation industrial sectors. This labor profile reflects the numerous West Coast distribution centers, online fulfillment centers, and the Tahoe/Reno Industrial Center located in the Reno area.

Supporting a concentration of warehousing and manufacturing activity, the Union Pacific Railroad intermodal facility in Sparks, Nevada, provides trailer-on-flatcar and container-on-flatcar services. Several local trucking firms support this facility with intermodal drayage, warehousing, and regional trucking services. Access to the facility is gained from the I-80 Pyramid Way exit. It is located next to the Union Pacific Railroad Sparks switching yard.

Clark County is the state's other significant freight activity center. It also has high numbers of employment in key freight industrial sectors. Union Pacific Railroad provides Clark County with rail freight service, but it does not have the same kind of truck-rail intermodal facility that exists in Sparks. I-15 provides a direct connection between the Las Vegas area and markets in Southern California and Utah. United Parcel Service and FedEx provide package delivery services at McCarran International Airport.

## Mining

In addition to activity in its urban areas, Nevada's hard rock mining industry creates significant freight activity. The largest concentration of mines is in the I-80 corridor, including Lander, Humboldt, and Elko Counties, where mining employment is more than six times higher than the state average. The FAF data show that ore from the mines moves by rail and truck. But overall, trucks are the primary mode for transporting mine-related cargo.

# **Existing Freight Infrastructure**

### Rail

Nevada has two primary rail corridors generally running east-to-west across the state. Union Pacific Railroad operates both the northern and southern east-to-west corridors. Burlington Northern Santa Fe Railway has trackage rights on much of the Union Pacific Railroad in Nevada. A two-route northern corridor serves Reno and other Northern Nevada communities connecting to Sacramento, San Francisco, Salt Lake City, and Denver. The southern route connects Las Vegas with Salt Lake City and Los Angeles. In addition to these main lines, Nevada has several branch and short lines, including the Nevada Northern Railway and the Union Pacific Railroad Thome Branch.

The 2012 Nevada State Rail Plan suggests that Nevada's freight rail system provides an acceptable level of service. The plan identifies new Northern and Southern Nevada inland port projects as well as spot railroad and rail-highway grade crossing improvements in its project list. Refer to the State Rail Plan summary in this report for additional information and links to the rail study.

### Truck

I-80 and I-15 are the principal truck routes across the state. While the sections of these routes through the urbanized areas of Las Vegas and Reno experience up to 7,000 trucks each day, truck through traffic is around 4,000 trucks per day on I-15 and 2,500 trucks per day on I-80. Other important truck routes include US 93 and US 95. Within urban areas, peak periods of congestion can cause delays for truck traffic. In rural areas, these principal routes as well as other roads are operating at an acceptable level service.

#### Air

The Reno-Tahoe International Airport provides air cargo service to Northern Nevada. It is served by the integrated carriers United Parcel Service and FedEx and other air cargo carriers including Capital Cargo International and DHL. United Parcel Service and FedEx also provide package delivery services at McCarran International Airport in Las Vegas.

# Freight Infrastructure Needs Assessment

## Freight Flow Forecasts

The FAF3 commodity flow forecasts show freight volume and value growing by 2 to 3 percent each year between 2010 and 2040. Figure 10 shows the 2010 FAF3 commodity flow estimates together with the 2040 FAF3 commodity flow forecasts. The 2060 forecast is an extrapolation of the FAF3 data based on 2010 to 2040 growth rates. This graphic shows that most Nevada internal, internal-external, and external-internal freight

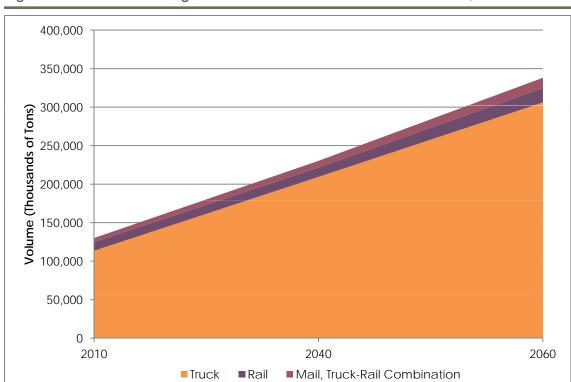


Figure 10. Nevada Freight Forecasts in Volume for Surface Modes, 2010 to 2060

will move by truck through the 2060 planning horizon. The portion of freight volume moving by air is too small to show on this graphic.

Figure 11 on the following page shows the 2010 FAF3 commodity flow estimates together with the 2040 FAF3 commodity flow forecasts, in value. As in Figure 10, the 2060 forecast is an extrapolation of the FAF3 data based on 2010 to 2040 growth rates. The value of freight is estimated in constant 2010 dollars. The FAF3 forecasts show that truck and combination truck-rail shipments, including mail, will carry the most freight in dollar terms.

Appendix B contains a tabular summary of existing and future internal, internal-external, and external-internal freight flows for Nevada. Appendix C details the type of internal, internal-external, and external-internal commodity flows for Nevada. Appendix D shows commodity flows to and from California to all states by Washington, Oregon, and Nevada. While the FAF3 database does not identify the route used by these commodity flows, a significant portion of these east-to-west flows passes through Nevada.

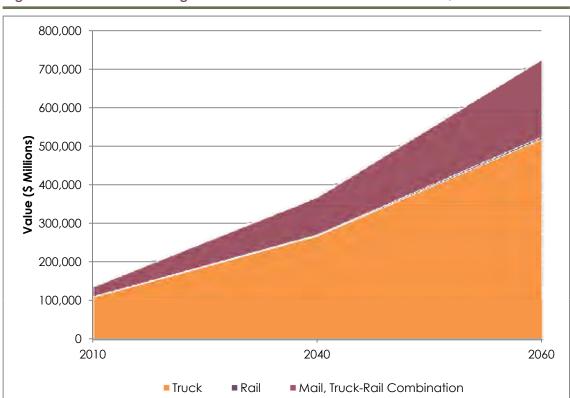


Figure 11. Nevada Freight Forecast in Value for Surface Modes, 2010 to 2060

### **Road Infrastructure Needs**

The majority of freight moving to, from, and within Nevada will move by truck in 2060. The Nevada Statewide Travel Demand Model (NVTDM) incorporates the FAF3 commodity flows into its 2060 traffic forecasts. While the forecasts suggest growing congestion in the urban areas, most of Nevada's rural interstates and highways will function at an acceptable level of service through the 2060 planning horizon.

Weekend and holiday traffic can cause significant delays for both trucks and passenger vehicles on I-15. Stakeholders identified the busy corridor between Las Vegas and Los Angeles as needing additional capacity. New capacity could be gained by widening the existing interstate or by upgrading parallel facilities. The I-15 Mobility Alliance is an ongoing, interstate effort involving California, Nevada, Arizona, and Utah stakeholders to find solutions to address growing congestion in this corridor.

Stakeholders also identified a need for passing and turning lanes throughout the state to improve safety, as well as more turnouts or pullouts to accommodate recreational vehicles and trucks. This will become more important as overall traffic volumes increase.

### Rail Infrastructure Needs

The FAF3 commodity flow forecasts show that rail will continue to be the primary transportation mode for bulk commodities such as coal, mineral ores, and chemicals moving to and from Nevada. It will also continue to serve the longer-distance truck-rail combination shipments moving from California ports to distant markets in the Midwest or East Coast. Connecting Nevada stakeholders have expressed interest in expanding freight rail service.

The State Rail Plan identified a need for new Northern and Southern Nevada inland ports. The impetus for these projects will come from development in the manufacturing and distribution sectors. An intermodal terminal similar to the Union Pacific Railroad facility in Sparks could emerge as an inland port places such as Silver Springs or North Las Vegas, given the mix of manufacturing and distribution uses.

## Air Cargo Infrastructure Needs

While Nevada's existing airports are adequate to handle current air cargo demand, population growth in Northern and Southern Nevada may warrant new commercial aviation airports. The proposed Ivanpah Airport is planned near the California-Nevada border at Primm to relieve congestion at McCarran International Airport. This reliever airport would have ample area for distribution and warehousing activities with access to I-15 and the proposed passenger rail corridor between Las Vegas and Los Angeles.

Stead Airport is the reliever for Reno-Tahoe International Airport. A former air force base, Stead is home to the Reno Air Races. It may become more important as Northern Nevada's economy grows and the Reno-Tahoe International Airport reaches capacity. The Silver Springs Airport may also provide air cargo service as industrial activities in the US 50 corridor between Carson City and Fallon develop.

## Intermodal Facilities

During the Connecting Nevada stakeholder outreach effort, participants expressed an interest in developing inland port facilities in Nevada. A number of characteristics of such facilities is present in Nevada, but more will need to be done to support development of an inland port in Nevada. The following section provides background on inland ports and intermodal facilities.

## **Need for Inland Ports and Intermodal Facilities**

Three main drivers exist for inland port and intermodal facility demand:

- Exports riding high shipments to emerging markets continue to rise; U.S. agricultural products are in high demand in China
- Rising fuel costs driving rail and intermodal inland ports offer cost-effective intermodal access and are critical components in the rapid movement of goods to and from seaports
- Growth in global containerized shipping savvy shippers make use of import containers arriving at inland ports to export goods back overseas

Inland ports and intermodal facilities are hubs designed to move international shipments more effectively between maritime ports and locations throughout the U.S. interior. They are connected by dedicated rail lines to one or more seaports or consumer centers.

Critical to the success of new inland ports is their connectivity to rail and seaports and their ability to provide manufacturers with smooth and quick intermodal transloading. Their location is vital. Many of the country's inland ports are located in the Midwest, including Chicago, Memphis, St. Louis, and Kansas City. A number of new locations are under development, such as the 4,000-acre Florida Inland Port in St. Lucie, Florida, and the 580-acre Inland Port Arizona in Casa Grande, Arizona, which will become the first inland port to serve the ports of Los Angeles and Long Beach.

# A legitimate inland port will typically have the following characteristics:

- Market proximity to at least 3 million people within a 200 mile radius.
- A major, direct connection to an American seaport by way of a Class I railroad. This rail
  corridor forms the "stem" of the coastal port/inland port barbell, as dedicated container trains—often consisting of upwards of 250 double-stack cars—run steadily between
  the two locations. Some inland ports primarily serve one corresponding seaport, using
  one Class I railroad.
- Free Trade Zone (FTZ) status and privileges.
- An abundance of reasonably priced labor and commercial real estate for warehousing and distribution, relative to the East and West Coasts.
- An overall governing body or at least a consortium of stakeholders collaborating in a cohesive management plan for the overall effectiveness of the inland port.

- A state and local government climate that is enthusiastic about inland port development and is willing to offer strong incentives to participants.
- Two trends have converged to make inland ports an increasingly viable option for import distribution:

The economics of long- and short-haul rail shipping are steadily improving. Railroads have made major financial commitments to infrastructure and terminal improvements, as well as service, in recent years. Trucking accounts for the vast majority, more than 70 percent, of U.S. freight shipments. However, the fastest-growing mode of transportation has been intermodal. Rail and intermodal transportation will likely continue to increase in popularity as rail's economies of scale continue to improve with rising fuel costs. Union Pacific Railroad, for example, expanded its intermodal volume about 20 percent between 2009 and 2010. Rail's biggest inroads are expected in shipments of less than 500 miles, where trucking has traditionally been considered more competitive. In addition, rail is a far more "sustainable" mode of transportation—producing 40 percent to 60 percent less in carbon emissions than trucking.

While the railroad industry grows, the trucking industry has been battered by the past few years of recession. Major carriers such as Schneider National, Werner Enterprises, and J.B. Hunt have cut over-the-road capacity by 12 to 15 percent during the past few years, while several smaller companies and owner-operators have gone out of business. Aside from skyrocketing diesel fuel prices, the industry is challenged by an anticipated shortage of up to 300,000 drivers; many drivers have retired or left for other jobs.

Not only are inland ports growing in number and size, but coastal gateways are concurrently increasing their flexibility for straight-through shipping. Many are becoming classified as "agile ports," with capacity to accommodate a variety of vessel types, as well as technology and improved business practices to decrease "dwell time" in ship scheduling, offloading, and land distribution.

Another factor for importers subject to U.S. Customs duties and other taxes is the increase of inland FTZ locations. About 250 FTZ locations now exist, many of them inland, permitting users to economically combine import and regional distribution functions at the same facility.

# When are inland ports an advantage?

Well-connected and strategically located inland ports are most advantageous for businesses to use when:

- Throughput and transportation at major import entry points are slowed by heavy port congestion.
- The economics of rail shipping can exceed that of trucking.
- There is a need to consolidate import and distribution functions in one location.

- Space for necessary warehousing and distribution facilities, as well as labor, is cheaper than around a coastal port, or public-sector tax climates and other incentives make an inland location more desirable.
- An inland location permits consolidation of real estate and other resources and still satisfies logistics needs.
- You are a producer in the interior United States seeking a quick channel to coastal or export markets.
- Your company has a strong sustainability initiative that can benefit from rail shipping's lower fuel costs or terminals that operate in a "greener" fashion.

# Key takeaways

- Inland ports help provide the through-put capacity needed to sustain growth at our nation's major container seaports.
- Inland ports showcase the growing and vital role that intermodal rail plays in the U.S. supply chain.
- The contribution of private-sector investment to complement that of the U.S. government and port authorities is essential to the creation of future U.S. logistics infrastructure.
- A successful inland port must contain three key elements: scale, rail, and proximity to a large population base.
- Inland ports will continue to evolve and grow as they provide needed supply chain efficiencies.

# **Bicycle and Pedestrian Element**

Stakeholders discussed issues related to nonmotorized transportation at both the Las Vegas and Reno stakeholder workshops. In addition to expressing an interest in improving local bicycle networks within urbanized areas, participants talked about more regional connections to support tourism and commuting (for example, in Northern Nevada, participants discussed commuter/recreation routes from Fernley to Reno and Reno to Carson City).

Nevada's urbanized areas have done much to promote bicycle and pedestrian activity. Nonmotorized modes provide options for Nevadans for recreation and short trips, although the vast distances that separate Nevada's population centers make the wide use of bicycles and walking impractical for intercity travel.

To promote the use of all transportation modes and make Southern Nevada a more sustainable place to live, the RTC of Southern Nevada is conducting a regional Complete Streets Initiative. The first step toward achieving results in this initiative is the Complete Streets Study. The study will create a report specific to Southern Nevada that provides guidance for jurisdictional and regional agencies looking to incorporate complete streets concepts into their standard practices.

The City of Sparks was recognized by Walk Friendly Communities for devoting an entire chapter of its Comprehensive Plan to connectivity and complete streets. The City of Las Vegas has developed complete streets standards, providing guidance for public streets, private streets, and private drives associated with new development.

The City of Las Vegas is also incorporating all modes into new roadway design. Consideration of nonmotorized needs during development of roadway projects is the first step in developing a nonmotorized network throughout the state.

# **Bicycle Network**

The Nevada State Bicycle Plan identifies actions for improving conditions for bicycling, clarifies NDOT's role in bicycle transportation, and establishes policies for further integrating bicycling into the current transportation system.

NDOT is currently looking to assist the rural areas (outside of MPO jurisdiction) with bicycle facilities as roadway improvements are implemented throughout the state. NDOT is currently assisting rural counties throughout the state in developing local community bicycle plans.