



REPORT CARD FOR IDAHO'S INFRASTRUCTURE



[INFRASTRUCTUREREPORTCARD.ORG/IDAHO](https://infrastructurereportcard.org/IDAHO)



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Thank you all for your commitment to Idaho and to the future of its infrastructure.

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2025 REPORT CARD FOR IDAHO'S INFRASTRUCTURE

Executive Summary

Idaho's infrastructure underpins its economy, connects communities, and supports quality of life. With one of the fastest growth rates in the nation—nearly 25% since 2010—Idaho faces mounting pressures on systems built decades ago for far fewer people. The 2025 Report Card for Idaho's Infrastructure, developed by the Southern Idaho Section of the American Society of Civil Engineers, evaluates **nine sectors: aviation, bridges, dams, drinking water, energy, roads, schools, transit, and wastewater**. Grades range from a high of C+ for energy to a low of D+ for schools, showing systems that are generally safe and functional today but increasingly strained by age, growth, and funding gaps.

Aging assets and rising demand are recurring themes. More than 1,500 bridges need repair, over half of school building square footage is in fair or poor condition, and most drinking water and wastewater systems face renewal backlogs. Local agency reports indicate that many rural roads are also in fair or poor condition, and urban corridors face persistent congestion despite recent capacity projects while public transit systems operate with aging fleets and growing demand. Dams average 76 years old, and a quarter are classified as high hazard. Airports maintain adequate pavement conditions but face a \$650 million capital shortfall over the next six years.

Funding constraints limit progress. Idaho relies heavily on local ratepayers, municipal bonds, and competitive federal programs; dedicated state funding is rare outside of transportation categories. State law restricts local option taxes, limiting communities' ability to generate new revenue for infrastructure. While the Infrastructure Investment and Jobs Act (IIJA), the American Rescue Plan (ARPA), and state programs like Leading Idaho and the Transportation Expansion and Congestion Mitigation (TECM) fund have supported critical projects, these are often one-time boosts rather than sustained funding. In many communities, especially small and rural ones, limited tax bases and match requirements delay or scale back needed work.

Public safety is a concern as well. Roadway fatalities reached a two-decade high in 2023. Sixty-five wastewater treatment plants reported Clean Water Act violations. While most public water systems meet federal standards, small systems are more vulnerable to compliance issues. Incompatible land uses near airports, aging school safety systems, and wildfire threats to energy and transportation corridors highlight the need for proactive planning.

Resilience and innovation are emerging strengths. Energy utilities are moving toward 100% clean generation within 25 years, integrating wildfire-resistant designs and major transmission projects. Some cities are deploying adaptive traffic signals, real-time transit information, and electric buses. Others are piloting biosolids drying, water reuse, and advanced leak detection. These advances, however, are not yet widespread, and many smaller agencies lack resources to adopt them.

The 2025 Report Card calls for:

- **Stable, long-term funding for all sectors.**
- **Asset management and preventive maintenance to extend asset life.**
- **Resilient design standards suited to Idaho's geography and climate.**
- **Regional coordination to share resources and expertise.**

Idaho stands at a pivotal moment. Recent investments and innovative approaches have laid the groundwork for stronger, more resilient infrastructure. By building on this momentum with strategic investment, innovation, and collaboration, Idaho can move its infrastructure from mediocre but serviceable, to resilient, sustainable, and ready for the future.



Recommendations to Raise the Grade



ESTABLISH DEDICATED, LONG-TERM FUNDING FOR CRITICAL INFRASTRUCTURE.

Most sectors—particularly transit, schools, water, and wastewater—lack stable state-level funding. Current reliance on competitive grants, one-time infusions, and limited local tax authority leads to deferred maintenance and uneven investment. Dedicated, predictable funding streams, combined with expanded local option tax authority, would allow communities to address needs proactively and sustain long-term improvements.



EXPAND ASSET MANAGEMENT AND PREVENTIVE MAINTENANCE PRACTICES.

Proactive maintenance and condition tracking extend the life of infrastructure and reduce costly emergency repairs. Statewide support for asset management systems, training, and data-driven decision-making will help agencies prioritize investments, coordinate upgrades, and keep facilities in good working order.



PRIORITIZE RESILIENCE AND HAZARD MITIGATION IN PLANNING AND DESIGN.

Idaho's geography and climate risks—including wildfire, flooding, extreme weather, and seismic hazards—require resilient infrastructure. Updated design standards should address redundancy, emergency access, and hazard resistance. Incorporating resilience into transportation, energy, and water systems will protect public safety, reduce service disruptions, and safeguard economic activity.



STRENGTHEN PARTNERSHIPS AND REGIONAL COORDINATION.

Collaboration among state, local, tribal, and federal partners can improve efficiency, leverage funding, and align priorities. Shared resources—such as equipment, technical expertise, and emergency response capabilities—can help rural and smaller agencies implement cost-effective solutions and meet regulatory requirements.



FOSTER INNOVATION AND PUBLIC ENGAGEMENT.

Support adoption of proven, cost-effective technologies—such as intelligent transportation systems, advanced water treatment, clean energy generation, and real-time monitoring. Pairing innovation with clear, consistent public outreach will build understanding of infrastructure's economic and safety benefits, generating support for investment and policy changes.

About The Report Card for America's Infrastructure

Every four years, America's civil engineers provide a comprehensive assessment of the nation's 18 major infrastructure categories in ASCE's *Report Card for America's Infrastructure*. Using a simple A to F school report card format, the Report Card examines current infrastructure conditions and needs, assigning grades and making recommendations to raise them.

The ASCE Committee on America's Infrastructure is made up of 52 dedicated civil engineers and infrastructure professionals from across the country, with decades of expertise in all categories, who volunteer their time to work with ASCE Infrastructure Initiatives staff to prepare the Report Card. The Committee assesses all relevant data and reports, consults with technical and industry experts, and assigns grades using the following criteria:

Methodology

CAPACITY

Does the infrastructure's capacity meet current and future demands?

CONDITION

What is the infrastructure's existing and near-future physical condition?

FUNDING

What is the current level of funding from all levels of government for the infrastructure category as compared to the estimated funding need?

FUTURE NEED

What is the cost to improve the infrastructure? Will future funding prospects address the need?

OPERATION AND MAINTENANCE

What is the owners' ability to operate and maintain the infrastructure properly? Is the infrastructure in compliance with government regulations?

PUBLIC SAFETY

To what extent is the public's safety jeopardized by the condition of the infrastructure and what could be the consequences of failure?

RESILIENCE

What is the infrastructure system's capability to prevent or protect against significant multi-hazard threats and incidents? How able is it to quickly recover and reconstitute critical services with minimum consequences to public safety and health, the economy, and national security?

INNOVATION

What new and innovative techniques, materials, technologies, and delivery methods are being implemented to improve the infrastructure?

In addition to this national Report Card, ASCE's sections and branches prepare state reports on a rolling basis. Visit [InfrastructureReportCard.org](https://www.infrastructurereportcard.org) to learn about your state's infrastructure.

GRADING SCALE



EXCEPTIONAL: FIT FOR THE FUTURE

The infrastructure in the system or network is generally in excellent condition, typically new or recently rehabilitated, and meets capacity needs for the future. A few elements show signs of general deterioration that require attention. Facilities meet modern standards for functionality and are resilient to withstand most disasters and severe weather events.



GOOD: ADEQUATE FOR NOW

The infrastructure in the system or network is in good to excellent condition; some elements show signs of general deterioration that require attention. A few elements exhibit significant deficiencies. Safe and reliable with minimal capacity issues and minimal risk.



MEDIOCRE: REQUIRES ATTENTION

The infrastructure in the system or network is in fair to good condition; it shows general signs of deterioration and requires attention. Some elements exhibit significant deficiencies in conditions and functionality, with increasing vulnerability to risk.



POOR: AT RISK

The infrastructure is in poor to fair condition and mostly below standard, with many elements approaching the end of their service life. A large portion of the system exhibits significant deterioration. Condition and capacity are of significant concern with strong risk of failure.



FAILING/CRITICAL: UNFIT FOR PURPOSE

The infrastructure in the system is in unacceptable condition with widespread advanced signs of deterioration. Many of the components of the system exhibit signs of imminent failure.

The 2025 Report Card on Idaho's Infrastructure



Aviation
D+



Bridges
C-



Dams
C



Drinking Water
C+



Energy
C+



Roads
C



Schools
D+



Transit
C-



Wastewater
C+

Comparison of 2018 and 2025 Grade

CATEGORY	2018	TREND	2025
Aviation	—		D+
Bridges	D	↑	C-
Dams	C	↔	C
Drinking Water	C	↑	C+
Energy	C+	↓	C+
Roads	C-	↑	C
Schools	C-	↓	D+
Transit	—		C-
Wastewater	B-	↓	C+
Overall GPA	C-	↑	C



Aviation



Photo: Aerial photo of the runway approaching the Lewiston Idaho Airport; Kathy Parsells

GRADE
COMPARISON

ID: D+
Nat'l: D+



AVIATION

EXECUTIVE SUMMARY

Idaho's 121 public-use airports are critical to connectivity, commerce, and emergency access, especially in rural areas. The 2020 Idaho Airport System Plan identifies 75 core airports, 37 of which are part of the National Plan of Integrated Airport Systems (NPIAS) and eligible for federal funding. The remaining 38 rely solely on state support. Rapid population growth has driven a 75% increase in passenger enplanements since 2014. Airports support 33,000 jobs, \$1.2 billion in earnings, and nearly \$5 billion in economic output. Yet NPIAS airports face a \$650 million capital shortfall from 2024–2029. Federal funding has remained flat since 2012 while construction costs have doubled, and funding limits on terminal and hangar projects constrain growth. Without targeted investment, Idaho's airports risk falling behind rising demand and economic needs.

CONDITION

According to the 2020 IASP, the majority of Idaho airports met recommended Pavement Condition Index (PCI) values for their runways, taxiways, and aprons on a scale from 0 to 100. The IASP recommends an average PCI value of 65 for runways, 60 for taxiways, and 50 for aprons at NPIAS airports and 50 for runways, 45

for taxiways, and 40 for aprons at non-NPIAS airports. A PCI value of 55 or lower is considered poor condition. While the system is currently meeting required levels, state and federal funding levels pose a significant threat. Many pavement rehabilitation projects and airfield safety projects are being delayed due to a shortage of funding.

Table 1. PCI Values at Idaho Airports

	Commercial Service	NPIAS General Aviation	Non-NPIAS General Aviation
Runway	82	71	58
Taxiway	75	71	61
Apron	70	67	54

Source: ITD Pavement Management Tool, 2020 Idaho Airport System Plan, and Individual Airport Pavement Management Plans

CAPACITY

Airport capacity can be measured in multiple ways. One of the most common is the number of aircraft operations (either a landing or takeoff) a runway can support on an annual basis. This is also referred to as Annual Service Volume (ASV). In Idaho, there are currently no airports constrained by runway capacity. In addition to accommodating a specific number of aircraft, the runway pavement must also be able to physically support the aircraft. According to the 2020 IASP, 10% of Idaho Airports do not have runway pavements of adequate strength to meet the needs of the aircraft that use or would like to use the airport. In addition to the strength of the runway, the length and width of the runway must also be adequate for an aircraft to safely land or take off on the runway. According to the 2020 IASP, 25% of Idaho airports do not meet runway length requirements and 10% do not meet runway width requirements for the aircraft that use or would like to use the airport.

Another measure of airport capacity is the ability to accommodate parked aircraft in either hangars or on aprons. Many airports have adequate physical space to construct hangars or aprons, but they lack the funding to construct the required infrastructure. While aprons and taxilanes to support hangar development are eligible for

federal funding, they are seen as a low priority and have limited funding available to them. In addition, federal funding will typically only fund the extension of power to a hangar development area. Other utilities, such as water, sewer, gas, and communications, are not eligible for federal funding.

For commercial service airports, one of the most important measures is the ability to accommodate passengers. Multiple factors impact the capacity of an airport's terminal area to accommodate passengers, including vehicle parking, terminal access roads, ticket counters, security screening lanes, baggage screening equipment, the size of passenger hold rooms, the number of aircraft gates, and the amount of aircraft parking. Multiple commercial service airports in Idaho are currently working to improve the capacity of their terminal system whether by adding gates, expanding security and baggage screening, or adding additional passenger and rental car parking. As an airport grows, federal funding to support terminal development is more restricted. The cap on the Passenger Facility Charge (PFC), which is levied on airline passenger tickets, has remained at \$4.50 for over 20 years, limiting funds available for financing terminal projects outside of debt.

OPERATION AND MAINTENANCE

The needs and operation of each airport vary considerably along with the diverse geography of the state. Lewiston-Nez Perce Airport is the lowest in Idaho at an elevation of 1,430 feet above sea level with relatively mild winters while the Driggs Reed Memorial Airport in southeast Idaho lays at the base of the Teton Mountains at the Idaho Wyoming border at an elevation of over 6,200 feet above sea level with much longer and colder winters. The type and number of aircraft using each airport also varies considerably. The Boise Airport supports a diverse mix of commercial, general aviation, firefighting, and military aircraft while the nearby airports in Nampa and Caldwell serve mainly general aviation. The operation and maintenance needs of each airport varies considerably.

Both state and federal funding is made available at GA and non-hub commercial service airports for preventative maintenance of existing pavements including sealing cracks, applying fog seals, and remarking pavement.

There is no state or federal funding available for general maintenance or operations. Items such as snow removal, mowing, building repairs, utility costs, replacing lights, janitorial services, or airport staff salaries are the responsibility of the airport. Most municipalities subsidize the operation of their airport with local funding. As the cost-of-living increases in Idaho, so too does the cost of operating an airport.

Many of the GA airports in the state are run by volunteer boards made up of local pilots whose knowledge and experience varies considerably depending on their background. While pilots understand how they would use an airport, many lack the knowledge and experience required to oversee the day-to-day operation of an airport along with the specialized knowledge of FAA or ITD policies and procedures required for use of grant funds. The makeup of these boards changes frequently over time leading to a constant loss of knowledge and experience.

There is no state or federal funding available for general maintenance or operations. Items such as snow removal, mowing, building repairs, utility costs, replacing lights, janitorial services, or airport staff salaries are the responsibility of the airport. Most municipalities subsidize the operation of their airport with local funding. As the cost-of-living increases in Idaho, so too does the cost of operating an airport.

FUNDING AND FUTURE NEED

Since 2012, the Airport Improvement Program (AIP) funding level remained flat at \$3.35 billion until 2025 when AIP saw the first significant increase to \$4 billion. There have been several supplemental funding programs including, Infrastructure Investment and Jobs Act (IIJA) funding, that will provide \$25 billion to NPIAS airports from 2022-2026. According to the National Highway Construction Cost Index (NHCCI), construction costs have approximately tripled since 2003. While the supplemental increase helps address some of the backlog after 20 years of stagnant funding levels, it is not enough to meet the needs going forward. Currently, NPIAS

airports in Idaho are requesting \$920 million in funding from 2024 through 2029. FAA has identified \$270 million in available funds, leaving a shortfall of \$650 million. Some additional IIJA funding may be available; however, the demand for these funds also far exceeds their availability. In 2022, airports requested \$14 billion in terminal projects through the IIJA Airport Terminals Program, although only \$1 billion in funding was available. ITD Aeronautics currently has \$1.8 million available to fund projects over the next five years and approximately \$15 million in requests, leaving a shortfall of \$13.3 million.

Table 2. Idaho Airport CIP Requests and Funding

	Capital Improvement Program Request	Anticipated Funding Available	Shortfall
Commercial Service	\$711,600,000	\$153,500,000	\$558,100,000
NPIAS General Aviation	\$208,300,000	\$117,100,000	\$91,200,000
Non NPIAS General Aviation	\$15,100,000	\$1,800,000	\$13,300,000
Total	\$935,000,000	\$272,400,000	\$662,600,000

Source: Idaho Transportation Department Division of Aeronautics and Federal Aviation Administration Helena Airport District Office

The constant lack of timely annual appropriations has also significantly impacted airports' ability to complete construction projects. As the AIP program must have at least 50% of annual appropriations to begin grant programming, recent years have seen construction grants not being issued until late July or August and even into September when much of the construction season in Idaho has passed. This also leads to long bid hold times

which causes increased contractor bid pricing to cover potential material cost increases from when they bid a project to when it is actually awarded.

AIP funding is only available to NPIAS airports, leaving the remaining 38 airports in Idaho to compete for less than \$500,000 in state funds typically available each year. In recent years, Idaho has allocated an additional

\$6.8 million through the Idaho First program and \$35 million through the Leading Idaho program from budget surpluses. While these programs help address some of the backlog, they are available to all airports in the state and with the increasing costs of construction, demand for the grants exceeded the funding available.

PUBLIC SAFETY

Most airports in the state meet FAA or ITD standards and can accommodate the aircraft that operate there. Projects to relocate both the Rexburg-Madison County Airport and the Burley Municipal Airport have been underway for some time due to their inability to meet FAA standards at their existing locations. Both have reached the point where the National Environmental Policy Act (NEPA) review will start soon, with relocation anticipated to start within the next five years. Relocation of these airports will address safety concerns at each site including an increased frequency of aircraft accidents, but the significant amount of funding required to relocate these airports means less money will be available for the remainder of the airports in the state.

RESILIENCY

The COVID-19 pandemic challenged the resiliency of airports in different ways. While many GA airports saw increases in aircraft operations and requests for new hangars, many of the commercial service airports saw

Without a significant, stable increase to state and federal funding levels, rising construction costs will continue to erode the value of the existing funding and weaken the aviation infrastructure in Idaho.

As Idaho’s population is projected to grow from just over 2 million people in 2024 to more than 2.3 million in 2034, one of the most significant threats to airports is the continued encroachment of incompatible land uses. While several municipalities have been proactive in preventing the encroachment of incompatible land uses such as residential by enacting airport compatible land use overlay zones, many airports either have no zoning in place or are surrounded by municipalities who do not own the airport and chose to prioritize growth over protecting nearby airports. According to the IASP, 38% of Idaho airports have close in objects such as trees that obstruct their runway approach slopes increasing the risk of an aircraft accident.

sharp sudden declines in passenger travel which impacted their operating revenues. Several of the airports have recovered to at or above pre-pandemic levels, while several have not.

Table 3. Enplanements at Idaho Airports (2019-2024)

Airport	2019	2020	2021	2022	2023	2024
Boise	2,057,750	991,241	1,809,000	2,230,467	2,369,164	2,475,370
Idaho Falls Regional	175,549	101,420	217,863	308,414	270,140	301,674
Friedman Memorial	89,317	46,468	94,166	100,586	109,368	121,123
Lewiston-Nez Perce County	51,406	23,528	34,959	41,720	36,761	55,467
Magic Valley Regional	43,626	15,630	30,892	16,548	19,871	31,734
Pocatello Regional	40,405	19,395	23,818	11,961	17,504	24,610
Total	2,458,053	1,197,682	2,210,698	2,709,696	2,822,808	3,009,978

Source: Federal Aviation Administration

The ongoing pilot and mechanic shortages also impact the resiliency of commercial service airports, as their routes are the first to be cut back when pilots or aircraft are not available. Many commercial service airports must subsidize new or existing airline service as airlines focus on the most profitable routes are reluctant to start new service with a revenue guarantee. While airports support a large geographical area, this is not always reflective of

the tax base that funds the airport such as the Pocatello Regional Airport which is owned by the City of Pocatello but supports a large area outside of the city limits.

Airports have also seen an increase in cyber attacks and have made significant investments in their Information Technology infrastructure to help prevent future attacks.

INNOVATION

Idaho airports have continued to find innovative ways to do more with less. Many of the commercial service airports have invested in Multi-Tasking Snow Removal Equipment that does the job of two pieces of equipment with one operator helping to reduce operational costs. Many have employees who serve multiple functions such as the Friedman Memorial Airport whose operations personnel also serve as Air Rescue and Firefighting Personnel. Several airports have installed camera systems that pilots can use to see actual on-field conditions. Airports have also had to look to private industry to help

provide innovative solutions to improve airport reliability through the development of special instrument approach procedures where the FAA does not have the capacity to pursue innovative solutions due to a lack of personnel.

Projects funded with AIP grants are limited to using only FAA specifications which in some cases significantly increase the cost of the project over other locally available materials. Rising construction and labor costs will force Idaho airports to continue to find additional ways to innovate and do more with less.



RECOMMENDATIONS TO RAISE THE GRADE

- Advocate for continued increases to FAA funding levels and timely appropriations.
- Advocate for increases to ITD Aeronautics grant funding from dedicated funding sources rather than relying on budget surpluses. Develop a system to prioritize how the ITD grant funding is distributed.
- Consider developing additional funding sources to support new air service and hangar development.
- Look for innovative ways to work with the FAA to increase collaboration between airports. Currently commercial service airports regularly meet and discuss the issues they are facing and how to potentially address them, including increased advocacy but there is little collaboration between GA airports.
- Raise public awareness about the economic impact of aviation infrastructure to garner support for increased funding measures and protect airports through compatible land use zoning.

SOURCES

Federal Aviation Administration, “Passenger Boarding (Enplanement) and All-Cargo Data, 2019–2024”, 2025.

Federal Aviation Administration, “National Plan of Integrated Airport Systems (NPIAS) 2025–2029 Report to Congress”, 2024.

Federal Aviation Administration, “Airport Improvement Program (AIP) Grants”, n.d.

U.S. Department of Transportation, “Bipartisan Infrastructure Law: Airport Infrastructure Grants”, n.d.

Bridges



Photo: Rainbow Bridge, Payette River; Paul Boehlke

GRADE
COMPARISON

ID: C-
Nat'l: C

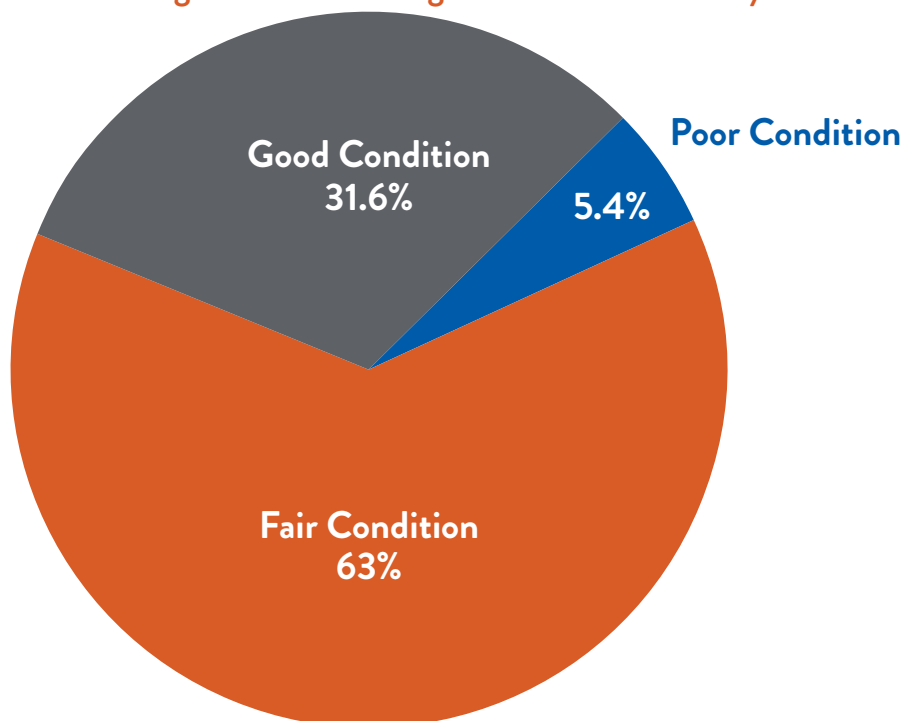


BRIDGES

EXECUTIVE SUMMARY

Idaho's 4,646 public roadway bridges are essential to mobility and commerce, yet only 31.6% are in good condition, compared to the national average of 44%. Most bridges (63%) are rated fair—at risk of declining without timely maintenance—and 5.4% are in poor condition. Over 1,500 bridges need repair, and nearly 400 have load restrictions, limiting freight and emergency access. The Idaho Transportation Department (ITD) focuses on preserving fair-condition bridges through enhanced inspections, planning, and strategies like bridge bundling and accelerated construction. Recent state and federal investments have helped, but Idaho still faces a \$2.2–\$2.3 billion backlog. With ongoing growth and increased strain, sustained, predictable funding is critical to prevent costly replacements, disruptions, and declining safety.

Figure 1. Idaho Bridge Condition Summary



Source: FHWA National Bridge Inventory

CONDITION

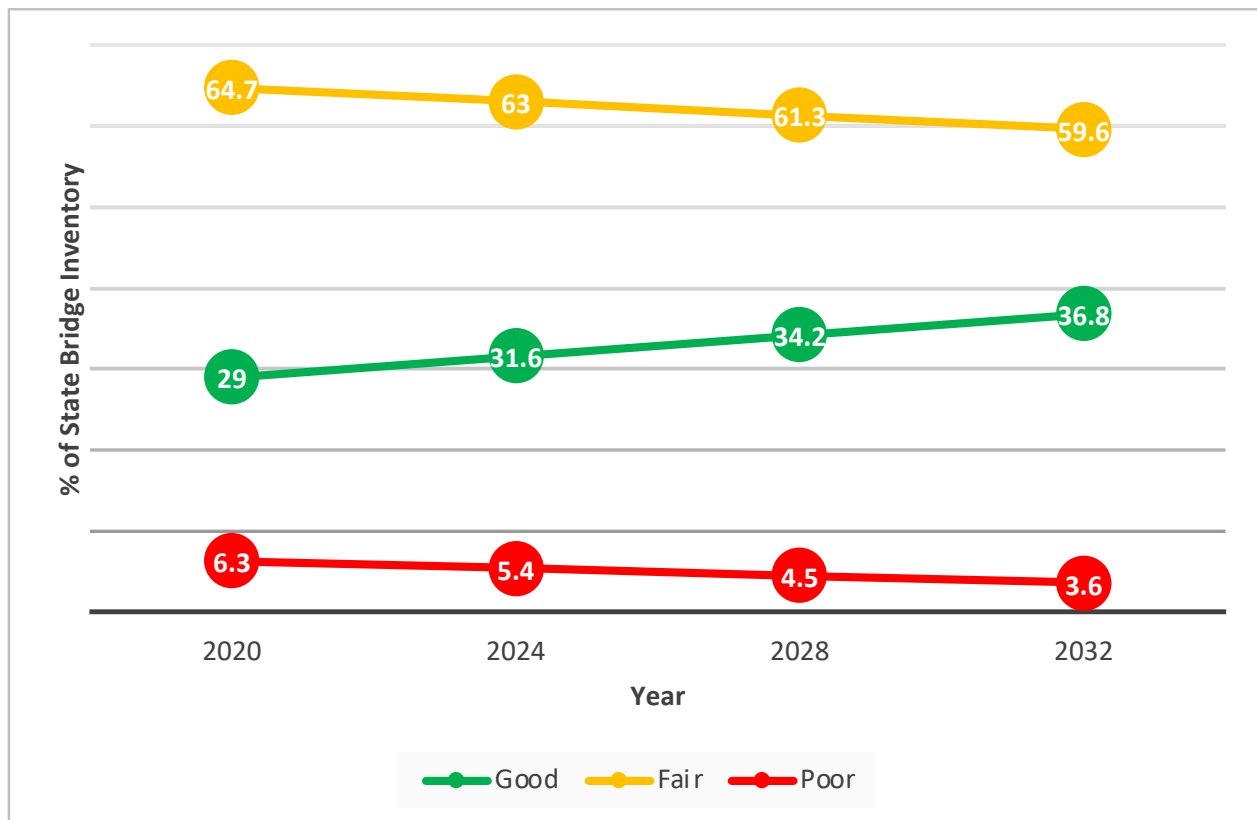
As of 2025, Idaho is home to 4,646 public roadway bridges, according to the latest National Bridge Inventory (NBI) data published by the Federal Highway Administration (FHWA). Of these, 1,468 bridges (31.6%) are classified in good condition, 2,928 bridges (63%) are in fair condition, and 250 bridges (5.4%) are rated in poor condition. These classifications are based on the lowest rating among a bridge's deck, superstructure, substructure, or culvert.

While Idaho's percentage of poor-condition bridges (5.4%) is below the national average of 6.8%, the relatively low percentage of good-condition bridges (31.6%) is notable—well below the national average of approximately 44%. This indicates that Idaho's bridge inventory is weighted heavily toward the fair condition category, which is often a transitional state. Bridges

in fair condition are safe, but require maintenance to prevent deterioration into poor condition, at which point repairs become more costly and operational restrictions more likely.

This distribution reinforces the strategic emphasis outlined in the Idaho TAMP and in the draft FY 2026–2032 ITIP, both of which prioritize the preservation of fair-condition bridges. This proactive strategy supports long-term asset sustainability and aligns with ITD's goal of preventing an increase in structurally deficient bridges statewide. Additionally, ITD's enhanced inspection programs—such as the scheduled scour evaluations in FY 2026–2027 and system-wide load rating initiative in FY 2031—further demonstrate the department's commitment to addressing aging infrastructure before it reaches critical thresholds.

Figure 2. Straight-Line Bridge Condition Projections through 2032



Sources: Idaho TAMP, ITIP, NBI

Overall, the condition data points to both progress and looming challenges. While the number of poor-condition bridges is relatively low and trending down, the large inventory in fair condition underscores the need for sustained investment in preservation strategies to maintain safety and minimize future rehabilitation costs.

CAPACITY

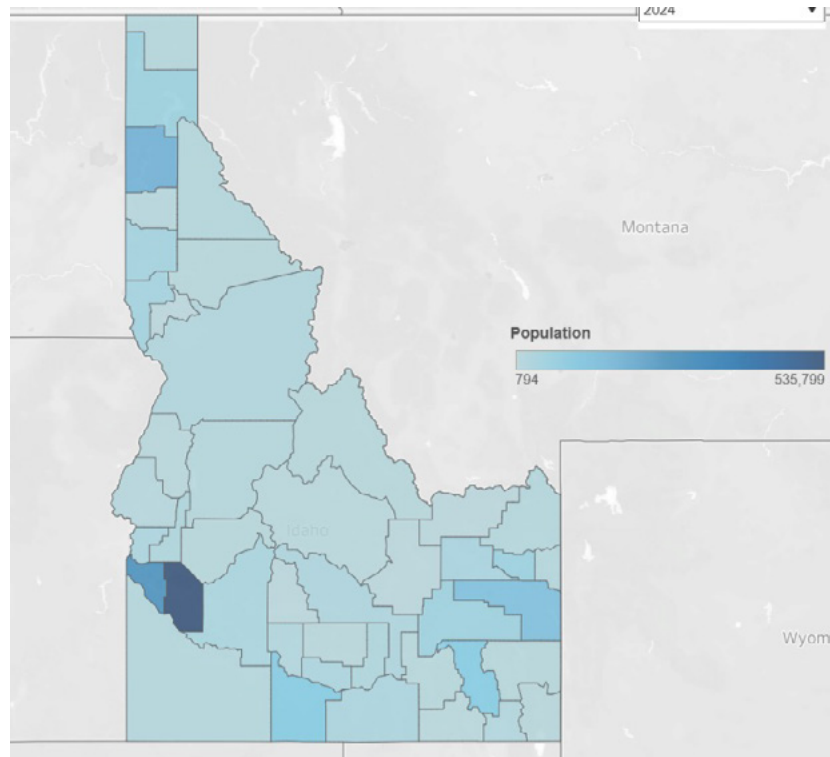
Idaho's population reached one million people in 1990 and recently surpassed two million in 2025. As Idaho's population continues to grow, especially in rapidly expanding regions such as the Treasure Valley, the demands placed on the state's transportation infrastructure—including bridges—are accelerating. The largest of six Metropolitan Planning Organizations (MPO) in Idaho, the Community Planning Association of Southwest Idaho (COMPASS), maintains the population and travel-demand forecasting for Ada and Canyon Counties, the two most populated counties in Idaho. This MPO accounts for 42% of Idaho's population over roughly 1,640 square miles. The remaining 58% of the population resides across 81,930 square miles, illustrating the stark divide between urban and rural areas in Idaho. The COMPASS Communities in Motion 2050 long-range transportation plan identifies growth trends that will significantly increase regional traffic volumes, thereby intensifying the pressure on existing roadway and bridge networks. This will exacerbate existing congestion challenges. For example, various roadway corridor sections show travel times longer than 2.5 times free-flow conditions during peak hour traffic. In the Treasure Valley (the Boise metropolitan area), the roads with the most significant traffic growth in the last five years were U.S. Route 20/26 and Interstate 84 in Canyon County, and State Highway 69 in Ada County.

Straight-line projections, as estimated in the figure above, of current trends in bridge conditions indicate that Idaho is doing a good job of improving the overall quality of the bridge inventory across the state. If these conditions persist, the numbers look even better in 2032, the horizon year of the current ITIP.

U.S. Route 20/26 and I-84 had growth rates of over 5%, and SH 69 had a growth rate of 5%.

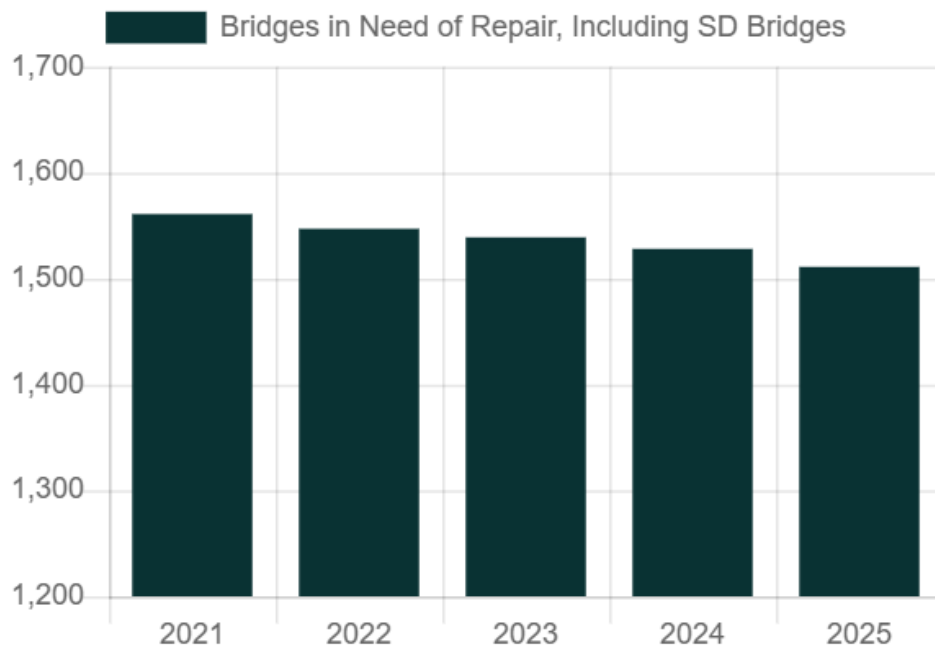
Aging infrastructure, much of it built more than 50 years ago, must accommodate this increasing load while remaining safe and efficient. In recognition of these pressures, ITD's draft FY 2026–2032 ITIP includes forward-looking programs to address structural vulnerability and capacity limits. These include statewide bridge scour evaluations scheduled for FY 2026–2027 and comprehensive bridge inspection and load-rating efforts across the State Highway System in FY 2031. Such initiatives are designed to anticipate and mitigate capacity risks by identifying deficiencies before they lead to service disruptions or restrictions. This strategic approach complements regional planning priorities and reinforces the importance of proactive maintenance and resilience in a growing state. According to NBI data from 2024, 379 Idaho bridges are posted for load restrictions. An American Road & Transportation Builders Association (ARTBA) report from the same year shows 1,528 bridges are still in need of repair, a slight downward trend since 2020 (1,543 bridges). The same report depicts that the number of poor bridges in Idaho has decreased significantly, from 286 bridges in 2020 to 226 bridges in 2024.

Figure 3. 2024 Population by County



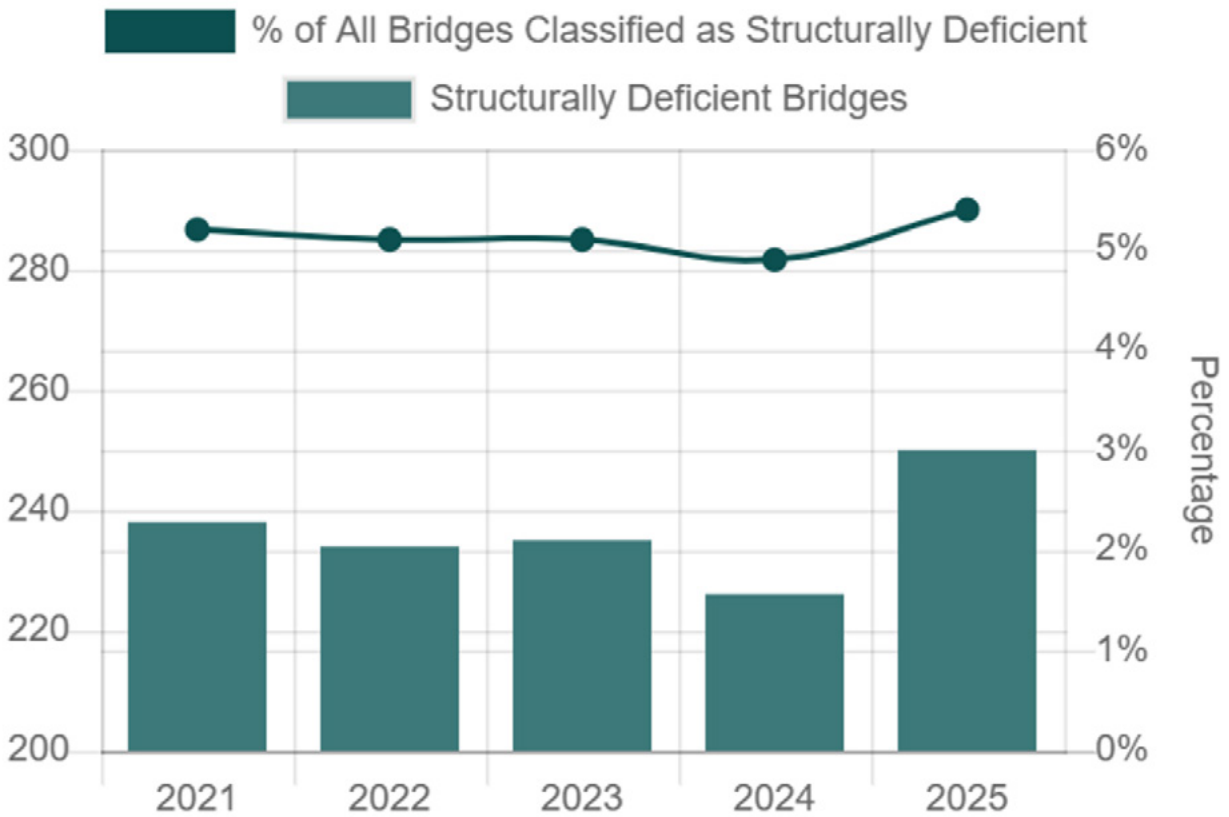
Sources: lmi.idaho.gov/census

Figure 4. ARTBA Summary of Bridges in Need of Repair and Structurally Deficient Bridges



Source: ARTBA

Figure 5. Number of Structurally Deficient Bridges



OPERATION AND MAINTENANCE

Idaho employs bridge management practices that include four features. The first feature is documenting performance measurements of bridges and culverts and comparing those with targets for performance. The second feature is reporting the performance of these assets to stakeholders. Next, work programs are developed to respond to bridges that do not meet the performance targets for a given asset. As last practice of this program, ITD demonstrates a commitment to preserving existing assets to the extent possible.

This asset management system has helped increase the percentage of bridges in good condition from 27% in 2013 to 32% in 2024. All bridges, in accordance with federal law, are inspected biennially. Bridges that have a low sufficiency rating are inspected more frequently to track their condition and determine whether additional restrictions or emergency repairs are necessary to protect the public. As bridges in the state continue to age, the cost of maintenance of the bridges goes up.

FUNDING AND FUTURE NEED

Funding for Idaho's bridges comes from a combination of federal, state, and local sources. Federal funds supply the base; state funding – derived from the state gas tax, vehicle

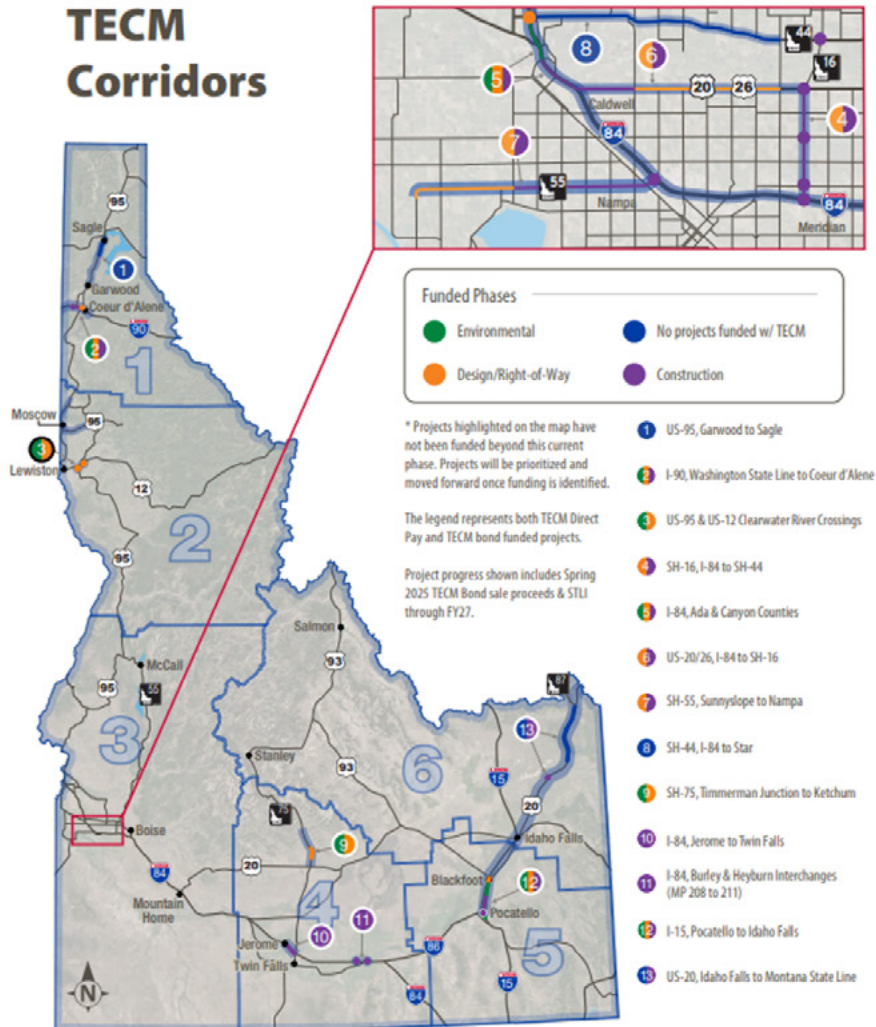
registrations, general fund transfers, and bonds augment and match those; and local contributions primarily fulfill matching requirements and specific local programs.



LEADING IDAHO WITH TRANSPORTATION



TECM Corridors



11/2024

YOUR Safety ••• YOUR Mobility ••• YOUR Economic Opportunity

Idaho levies a 32-cent gas tax per gallon which was last raised in 2015, leading to an annual revenue of about \$240 million. This funding is split between IDT, local jurisdictions, and the state police. The state gas tax is close to the national average of 32.6-cents of state gas tax, on top of the federal tax of 18.4-cents per gallon. At both the state and federal level, revenue from the gas tax alone is not sufficient to fund surface transportation, resulting in additional sources such as general fund transfers and bonds.

ITD has proposed a bridge funding program of approximately \$100 million annually in its draft FY 2026–2032 ITIP. Despite an infusion of \$225 million from the Infrastructure Investment and Jobs Act (IIJA) and \$200 million toward local bridge repairs from both Senate Bill 1359 (2022) and House Bill 770 (2024), total investments remain insufficient to close the statewide backlog, which currently stands between \$2.2 and \$2.3 billion.

Furthermore, ITD has been leveraging the Transportation Expansion and Congestion Mitigation (TECM) bonding program, which has raised over \$2 billion since 2019, and was further enhanced by House Bill 25 (2025), adding approximately \$60 million over three years. These funds

support bridge-related projects among other infrastructure programs, accelerating prioritized work across districts. Combined, these measures demonstrate proactive fiscal action—but still leave long-term needs unmet.

Funding Source / Program	Year(s)	Bridge-Focused Amount (\$M)	Notes
Senate Bill 1359 (Leading Idaho, LILB)	2022	200	One-time state funds for local bridge repairs
House Bill 770	2024	200	One-time state support for local bridge replacement
Draft ITIP (ITD Planning)	2026–2032	~700	~100M/year for preservation, replacement, and inspection
TECM Bonds & HB25	Since 2019, 2025	2,060	Existing TECM bond proceeds + HB25 allocation for bridge projects
IJA	Since 2022	225	Bridge Formula Funds
Identified Bridge Backlog	Current Estimate	2,200–2,300	Estimated cost of needed repairs across Idaho bridges

Idaho’s long-range transportation framework is built on a foundation of data-driven asset management and growing fiscal pressures. At the regional level, the COMPASS Communities in Motion 2050 plan forecasts a transportation shortfall of approximately \$5.4 billion through 2050 (~\$193 million per year), covering all modes and infrastructure types, including bridges. Meanwhile, ITD’s 2019 TAMP established a rigorous methodology for prioritizing infrastructure investments based on condition, risk, and performance outcomes. This approach guides ITD’s allocation of funds across bridge

preservation, rehabilitation, and replacement.

The TAMP explicitly reinforces the urgency of aligning funding allocations with measurable condition targets: prioritizing preservation (e.g., bridge deck sealing, scour mitigation) alongside rehabilitation and replacement, based on sufficiency ratings and structural risk. Combined with COMPASS’s regional shortfall outlook and ITIP projections, this robust planning framework strongly advocates for continued and expanded investment in Idaho’s aging bridge network.

PUBLIC SAFETY

Safety is inherently an integral part of operating and maintaining the bridge network within Idaho. As previously mentioned, the state works to inspect all bridges in the state and load post or close any that pose a risk to public safety. In early 2025, a bridge inspection on the Eckert Road Bridge over the Boise River indicated that significant structural decay had occurred in the timber foundations since the last inspection, leading to

a prompt closure on January 31st, 2025. Emergency repairs allowed this critical crossing in east Boise to reopen only 38 days later on March 10th, with a full replacement planned to begin in the fall of 2026. This kind of swift action is indicative of the prioritization of public safety and mobility when it comes to managing bridges in Idaho.

Figure 6. Eckert Road Bridge Closure



Source: idahonews.com

One troubling trend in regards to bridge safety in Idaho is a noticeable increase in the number of vehicle collisions with bridges. While there is not a good data source available to quantify the increase, there is a perceptible amount in the increase of reporting in local media for these occurrences. ITD reported that they responded to eight such incidents in 2023 alone, and their bridge inspection reports indicated that many more bridge collisions occurred that were unreported. In most of the reported incidents, the cause was due to loads consisting of tall construction equipment, such as dozers and excavators, striking the bottoms of girders at highway speeds. These incidents lead to temporary closures of the impacted bridges for emergency repairs, many times also impacting the crossing roadway for maintenance of traffic closures during repair work. ITD

designs all bridges in the state to be at least 14-feet tall, per federal standards, and self-imposes a target of 17-feet tall in most cases to allow plenty of clearance. For all bridges with fewer than 17 feet of clearance, the state provides advanced signage that the bridge is shorter than 17 feet, placing the responsibility to know the load heights on the drivers of these taller loads. One hypothesis for the perceived increase in bridge collisions is the historic increase in public infrastructure spending, combined with local growth fueling private development and an overall lack of skilled and experienced workers, is leading to a record amount of construction traffic on Idaho roads, increasing the prominence of these types of incidents. There is no data that directly correlates this hypothesis at the time of this writing.

Figure 7. Bridge Strike August 5th, 2025 near Blackfoot, Idaho



Source: Idaho Transportation Department

Bridges are inspected at least biennially, as required by federal law. If deficiencies are found in a bridge, it can have emergency repairs, more frequent monitoring, lane and/or load restrictions, or closures to maintain public safety.

The bridge inspection process in Idaho is very good in terms of monitoring, and, when necessary, posting and/or closing bridges that are in poor condition to minimize the likelihood of a catastrophic failure of a bridge.

INNOVATION AND RESILIENCE

Innovative planning, funding, and delivery mechanisms are increasingly central to managing Idaho's bridge assets efficiently. The COMPASS Communities in Motion 2050 plan advocates for exploring alternative funding strategies, such as local option sales taxes, fees levied on developers to fund public infrastructure improvements, and expanded access to federal and competitive grants, to address the region's projected \$193 million annual shortfall. These mechanisms could be particularly valuable in supporting local bridge rehabilitation and replacement

projects that fall outside of traditional funding pipelines. At the state level, ITD has already demonstrated a commitment to innovation in both financing and project delivery. The use of TECM bond proceeds, amounting to over \$2 billion since 2019, has accelerated infrastructure improvements, including bridge projects. Additionally, ITD has implemented multi-bridge bundling strategies, which consolidate similar projects across districts to save costs and shorten construction timelines. ITD's strategic funding allocation, reserving approximately 20% of

bridge dollars for preservation and 80% for rehabilitation and replacement, is rooted in performance-based asset management principles, ensuring resources are used where they deliver the most long-term value. These efforts collectively reflect a growing emphasis on cost-efficiency, proactive planning, and innovative delivery across Idaho's transportation system.

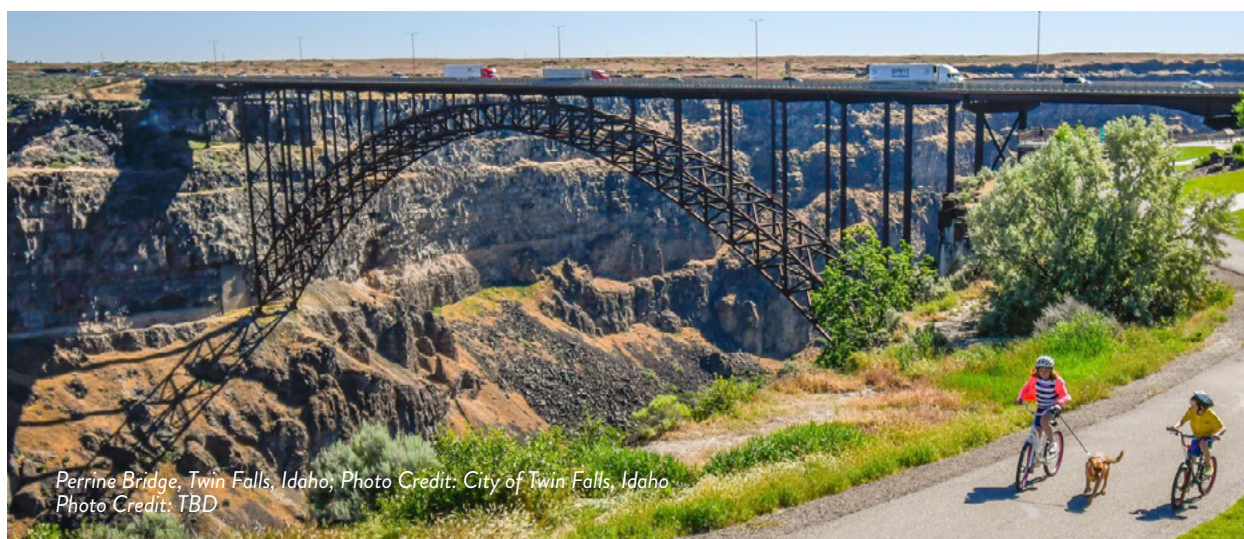
The Leading Idaho Local Bridge Program (LILB) Program exemplifies innovative governance and coordination through:

- **Targeted Ranking Process:** Bridges are scored based on certified inspection data and local knowledge—combining technical rigor with community context.
- **Bundled Contracting:** The Local Highway Technical Assistance Council and ITD have begun grouping local bridge projects for greater efficiency in design, construction, and oversight (similar to ITD's multi bridge bundling strategies).
- **Staged Delivery:** The program's phased awarding rounds facilitate steady implementation and help local agencies manage capacity constraints.

When taken alongside ITD's broader bonding and asset-management tactics, the LILB Program illustrates a replicable model of how regional, local, and state partners can mobilize condition-based funding to prioritize critical bridge needs.

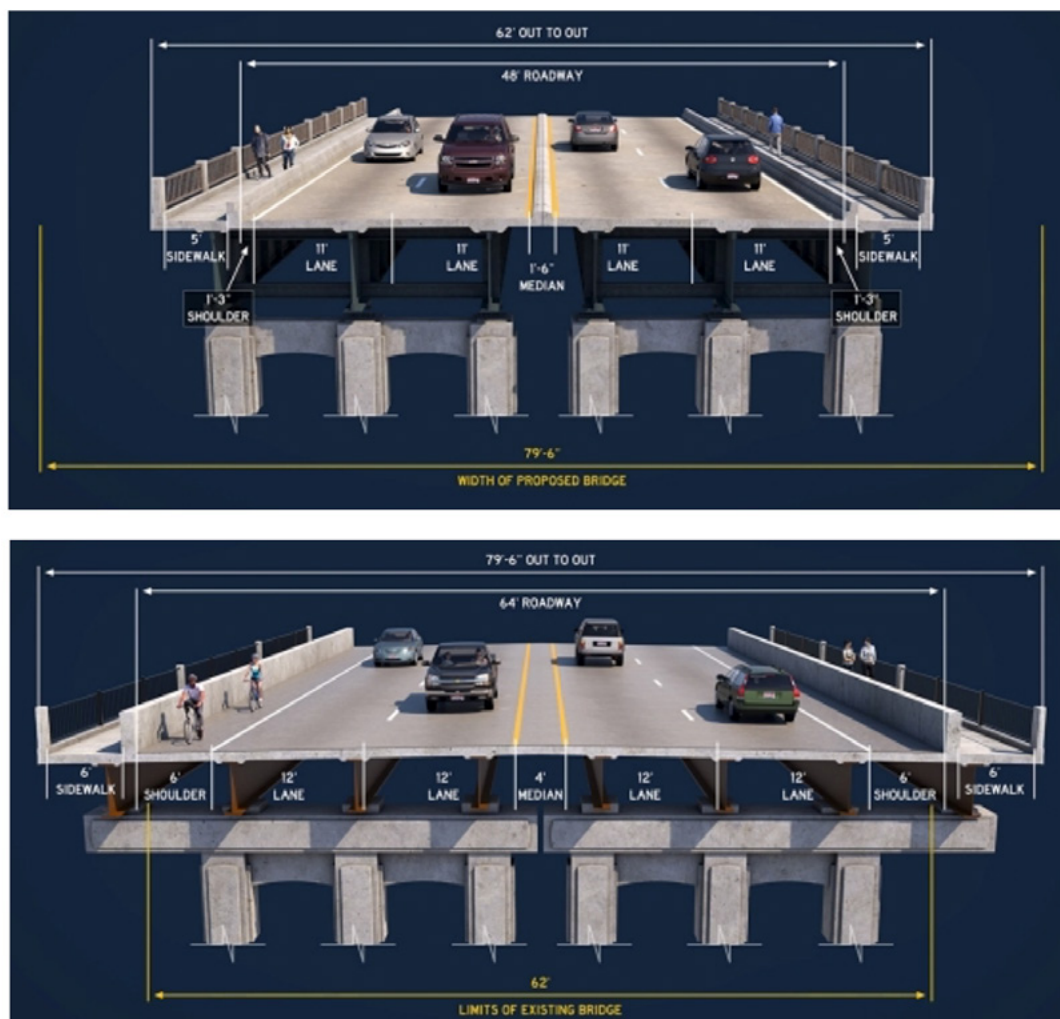
Innovative planning, funding, and delivery mechanisms are increasingly central to managing Idaho's bridge assets efficiently.

From a technical perspective, Idaho is considering more innovative approaches to bridge construction. Since the last ASCE Report Card in Idaho, ITD has delivered several slide bridges, including their first interstate slide bridge at Blacks Creek Interchange on I-84. A slide bridge is constructed adjacent to the existing structure and then moved into place, allowing traffic disruptions to be minimized compared to traditional construction methods. Another example of an innovative approach to construction was the replacement of the Clearwater Memorial Bridge on U.S. Route 12 over the Clearwater River in Lewiston, completed in 2025. For this project, the designers were able to reuse the existing foundations of a four-lane bridge and replace everything from the pier caps up. The project included widening the travel lanes and adding separated pedestrian facilities on the bridge. This approach allowed the construction of the bridge to maintain traffic on the only north-south bridge into Lewiston, while growing the capacity of this important commercial route.



Perrine Bridge, Twin Falls, Idaho, Photo Credit: City of Twin Falls, Idaho
Photo Credit: TBD

Figure 8. Clearwater Memorial Bridge



Source: Idaho Transportation Department

ITD has supported research and planning initiatives to strengthen the resilience of its bridges, particularly against seismic and flood-related risks. At Idaho State University (ISU), researchers funded by ITD developed a novel precast pier system that has demonstrated significantly better performance under seismic loads than traditional cast-in-place designs. This system was successfully deployed at the Interstate 15 Fort Hall Interchange. ISU is also advancing studies on using ultra-high-performance concrete (UHPC) for retrofitting damaged precast and cast-in-place bridges, as well as applying machine

learning and artificial intelligence to enhance structural resilience while optimizing material use, sustainability, cost, and construction time. Beyond research, Idaho's Communities in Motion 2050 long-range transportation plan identifies hazards—including extreme heat, flooding, wildfires, and earthquakes—and the infrastructure most at risk. The plan sets measurable targets, such as reducing to zero the share of floodplain bridges in poor condition by 2030, and outlines both near- and long-term mitigation strategies to achieve these goals.



RECOMMENDATIONS TO RAISE THE GRADE

- Additional funding for the most critical bridges needs to be addressed immediately, both on the state and local system. Allow room legislatively for more revenue sources that locals can raise, such as local option taxes or other means, to help bridge the gap of projected funding shortfalls.
- Continue to focus on rehabilitation and preservation efforts to maintain the positive trajectory of reducing the number of bridges in poor condition.
- Explore the causes of the perceived increase in bridge collisions and identify solutions for reducing these occurrences. Increase enforcement of oversized trip permits.
- Increase the level of innovative bridge construction by adopting alternative contracting approaches, accelerated bridge construction techniques, and other approaches that could stretch the shortfall of available investment in bridges as far as possible.
- Follow ITD's TAMP and draft ITIP to continue improving overall bridge condition ratings across the state.

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Dams



Photo: Swan Falls Dam and Power Plant in Murphy, Idaho

GRADE
COMPARISON

ID: C
Nat'l: D+



DAMS

EXECUTIVE SUMMARY

Idaho contains approximately 400 water storage dams and mine tailings impoundment structures that are regulated by the Idaho Department of Water Resources (IDWR) for the benefit of public safety. These important structures provide a variety of uses including irrigation, flood control, hydroelectric generation, recreation, and waste storage. Since the last ASCE Report Card was published in 2018, the number of state-regulated dams has remained largely unchanged, however the state's population has increased by a quarter million people to over 2 million inhabitants. This rapid growth is among the fastest in the nation in terms of a percentage, resulting in a much higher use of existing infrastructure and demand for services including those associated with water resources. The Idaho Water Resource Board (IWRB) has been tasked with allocating funds budgeted by the state legislature to help provide for the development of additional water storage projects. Nonetheless, efforts to repair or rehabilitate existing, non-federal water storage dams are still underfunded, particularly when viewed from a public safety perspective. A recent effort nationally to identify and possibly regulate small in-channel diversions whose potential failure would not threaten downstream life or property tend to detract from the other efforts to mitigate the consequences of failure that currently are directed at larger dams and reservoirs.

BACKGROUND

IDWR abides by the definition of a water storage Dam according to Title 42 Chapter 17 of the state legislature. This states that a Dam is a hydraulic structure greater than or equal to ten (10) feet in height and reservoirs that impound a volume of water greater than or equal to fifty (50) acre-feet. This differs from the U.S. Army Corps National Inventory of Dams (NID) definition which only includes dams that pose a high or significant hazard if they fail and meet certain size thresholds. Because of

these differences in the definitions by these entities, values tracked by the NID result in a total of 410 Dams, according to the database in March of 2024. The data discussed in this document will use the definition defined by the IDWR and their publicly available data on these structures. This dataset has been used on the past two report cards, but since the parameters, standards, and definitions tracked can change at any moment, trends are less likely to present themselves in a uniform fashion.

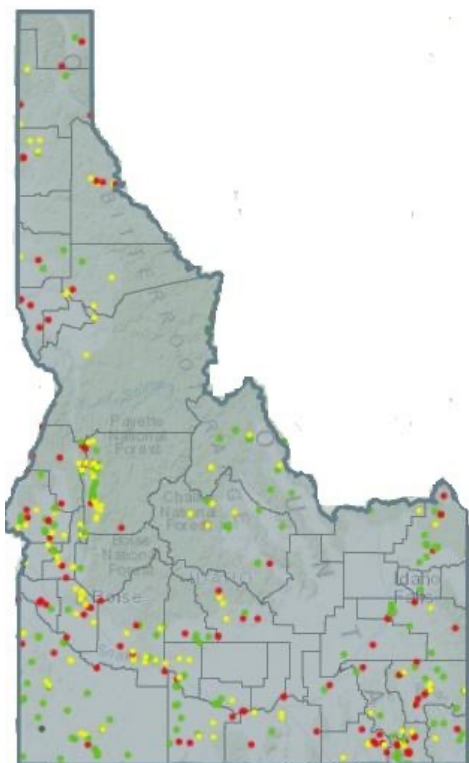
CONDITION AND PUBLIC SAFETY

The inspection of dams is tracked over time by two main metrics, a *hazard classification* and *condition assessment*. A combination of these metrics is used to evaluate each dam's overall risk to the public.

Hazard Classification

A dam's hazard classification is examined with a tier condition rating system that can be used to compare the potential threat to downstream life and property if a failure of the structure was to occur.

- Red Dots - High Hazard classification presumes that direct loss of human life will occur in the event of a dam failure and sudden release of water.
- Yellow Dots - Significant Hazard implies that significant economic damage will occur to developed property, with potential for indirect loss of life.
- Green Dots - Low Hazard classification indicates only minor damage to developed property, with no potential for loss of life.
- Black Dots - Undetermined classification indicates a dam without adequate information.



It should be noted that the hazard classification is not related to the existing physical condition of the dam, but rather the potential impact of a dam. The percentage of high hazard dams has increased by roughly 2% between the production of each of the last two report cards for a total of 24.3% as shown in Table 2 below. The percentage of significant Hazard dams has also increased. This increase can be directly linked to the rapidly increasing population within Idaho. This number is likely to increase with time, compounding the importance of regular maintenance, inspections and possible removals and rebuilds of this aging infrastructure.

Condition Assessment

The condition assessment is a determination of whether the structure meets certain design, operation, and maintenance standards.

- *Satisfactory* dams have no recognized existing or potential dam safety deficiencies. They are expected to perform well under all normal and extreme conditions, based on current safety guidelines.
- *Fair* implies that no existing dam safety deficiencies exist for normal design loading conditions, but the effects of extreme or rare probability events may result in less than acceptable performance.
- *Poor* condition assessment describes a situation of a known dam safety deficiency under normal loading conditions, or when enough uncertainty exists to prevent an adequate analysis of the structure's response to normal loading conditions. Remedial action and/or further investigations are necessary to resolve the deficiency.
- *Unsatisfactory* means a dam safety deficiency exists that requires immediate correction, including lowering or draining the reservoir as appropriate.
- *Not Rated* is used sparingly and typically is reserved only for dams that have not yet received the benefit of a complete inspection, do not fall under state jurisdiction, or have been inspected but, for whatever reason, have not been rated.

State law requires that owners of regulated dams possess a valid *Dam and Reservoir Certificate of Approval* issued by the Director of the IDWR, which authorizes impoundment of water in the reservoir behind the dam based on the results of periodic safety inspection. Prior to expiration of the Certificate, IDWR must again inspect each dam before renewing storage authorization, and renewal may be conditioned to include instructions that address public safety concerns. These dams must be inspected at least every five years. According to IDWR, how often a dam is inspected depends on factors like its condition, how it was built, its maintenance history, age, hazard rating, and size. These inspections help identify dams that may be becoming riskier over time and allow problems to be addressed before they become serious.

Emergency Action Plan

High hazard dams are identified because of the potential risk they pose to human life if they fail — not because of their current condition. Since failure of these dams constitutes much greater risk to human life, the IDWR Dam Safety Program requires an up-to-date Emergency Action Plan (EAP) be in place for all high hazard dams. The purpose of an EAP is to plan and protect the public health, safety, and welfare during a worst-case event. As of 2024, 98% of the high hazard dams in the state have an EAP in place.

Table 1 summarizes the statistics of these hazard classifications, condition assessment rating, and EAP completion of the Idaho dams in the IDWR dataset, as of March 2023.

Table 1. IDAHO DAM STATISTICS SUMMARY

Category	Factor Assessed	No. of Dams (2012 Data)	No. of Dams (2018 Data)	No. of Dams (2023 Data)
Hazard Classification	High Hazard	103	90	93
	Significant Hazard	156	151	150
	Low Hazard	237	155	139
	Not Classified	20	1	1
Condition Assessment	Satisfactory	340	139	73
	Fair	107	209	254
	Poor	11	38	48
	Unsatisfactory	7	3	2
	Not Assessed	111	8	6
	High Hazard Classification with Unsatisfactory Condition ¹	2	1	1
Risk Mitigation	All Dams with an Emergency Action Plan ²	150	89	120
	High Hazard Dams with an EAP	99	81	90
	Dams not required to have an EAP	217	301	251

¹ This value is included in the number of unsatisfactory Dams assessed.
² Some reservoirs have multiple dam(s) impounding a common body of water.

Table 2. IDAHO DAM STATISTICS PER CAPITA SUMMARY

Category	Factor Assessed	% of Dams (2012 Data)	% of Dams (2018 Data)	% of Dams (2024 Data)
Hazard Classification	High Hazard	20.0%	22.7%	24.3%
	Significant Hazard	30.2%	38.0%	39.2%
	Low Hazard	45.9%	39.0%	36.3%
	Not Classified	3.9%	0.3%	0.3%
Condition Assessment	Satisfactory	72.8%	35.6%	19.3%
	Fair	22.9%	53.6%	67.2%
	Poor	2.4%	9.7%	12.7%
	Unsatisfactory	1.5%	0.8%	0.5%
	Not Assessed	21.5%	2.0%	1.6%
	High Hazard Classification with Unsatisfactory Condition ¹	0.4%	0.3%	0.3%

¹This value is included in the number of unsatisfactory Dams assessed.

OPERATION AND MAINTENANCE

Dams in Idaho serve a variety of purposes, so how they are operated and maintained can vary. Dam owners are legally responsible to maintain and operate their dams in a safe manner. Many federally owned dams in the state are used for irrigation and flood control, and some also generate hydropower. These dams often have dedicated funding programs, which makes it easier to implement maintenance when needed. Privately owned hydroelectric dams also share this ability given their revenue abilities that fund upgrades to their equipment as well as meeting dam safety requirements.

The general facility maintenance practices can be assessed by the condition assessment rating for each of these structures. Dams that are considered “Satisfactory” or “Fair” are typically seen as well maintained. This accounted for 95.7% of the dams in 2012, 89.2% in 2017 and 86.5% in 2023. As this number decreases, the need for maintenance and repairs of dams in Idaho is expected to rise. This downward trend in condition can be more impactful to some ownership classifications than others due to the large capital expenditures that repairs and permits can require.

FUNDING AND FUTURE NEED

The Dam Safety Program budget has increased from \$250,000 in 2010 to roughly \$500,000 in 2023. This increase in funding also brings Idaho’s Dam Safety program closer to the national average of roughly \$6,000 per High-Hazard Potential dam. For the program to complete the necessary inspections of each facility, personnel must travel to each site. The larger western states incur a larger per capita travel cost and therefore need a slightly higher than national

average funding per dam to maintain the same quality of inspections and staffing. To mitigate this, the Dam Safety Program has staff in each region of the state. This program’s success is also vital for more than one purpose. The datasets produced by this program are also used for the National Flood Insurance Program’s Community Rating System and the Department of Homeland Security, as well as reports like this one. Between 2021 and 2022, \$320 million was allocated for major water

infrastructure projects, with \$250 million coming from the State's America Rescue Plan Act (ARPA) funds. The IDWR under federal guidance has been given the ability to use these funds to support maintenance, rebuild, and new construction of water projects. The Infrastructure Investment and Jobs Act (IIJA), passed in 2021, will also have many downstream funding effects on the dam infrastructure in the state of Idaho. For example, the U.S. Army Corps of Engineers awarded over \$17 million to the Dworshak Dam and Reservoir for a fish hatchery, electrical upgrades, and road restoration.

The National Inventory of Dams average completion year of construction of the dams in Idaho is 1949, meaning the average age of dams in Idaho is 76 years old. Aging of this infrastructure does not necessarily mean that these structures are at an increased risk, but it does mean that the current design standards and codes may not be met, and that maintenance can become more frequent without large maintenance projects considered and completed. It is expected that this aging infrastructure will incur increased per capita cost of maintenance and operation.

If maintaining high-risk structures becomes unreasonable, officials may choose to rebuild them or pursue new construction instead. Although the cost and permitting associated with a new dam is immense, the continuing increase in the population and recent trend of the population to spread away from city epicenters only means that they could become exponentially more difficult. With that said, the cost and public perception associated with a dam failure would be much worse on all levels.

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CAPACITY, RESILIENCE, AND INNOVATION

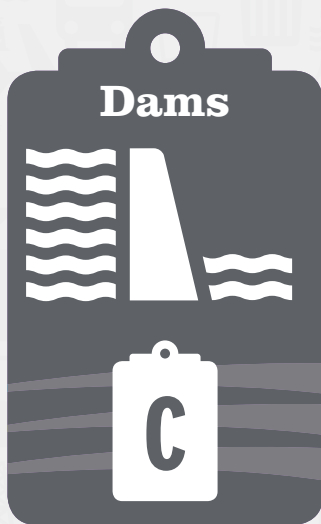
The resiliency of dam infrastructure can be considered as the systems' ability to function during an adverse weather year.

The current storage capability of dams classified under IDWR's definition total more than 16 million acre-feet of water. The captured water is used for agriculture, energy generation, consumption, and basic flood control. Idaho's current population is estimated to be 1.99 million people, an increase of almost 20% since the last report card. Since the construction of new water storage has not increased in the past decade, the per capita stored water capacity has reduced from 10 acre-feet per person in 2012 to just over 8 acre-feet per person as of 2024.

Water conservation has been a recent practice to combat this decrease. Farms have turned to sprinklers as opposed to previous flood irrigation, landscaping conducive to drier climates, and water conscious appliances. These practices can only reduce the water consumption need by so much, and as the population continues to increase, new water storage impoundments will need to be constructed. The current factors limiting

this construction are a direct result of construction and permitting obstacles related to altering existing waterflow conditions. With less than half of the state's land being privately owned, many political and bureaucratic hurdles exist when proposing this type of project due to federal land impacts.

Electric utilities are expected to lead the way in finding innovative solutions to address reduced water storage. One idea being explored is pumped storage, where water is moved to a higher elevation during low energy demand and released to generate power during peak times. Another option may be modifying existing dams to increase their storage capacity. Some efforts, like cloud seeding to boost rainfall and snowfall, are also being considered to help improve water availability in the future. This solution would still require additional water storage facilities to capture this increase in water. Regardless of what solution is selected to increase Idaho's water storage capacity, it is vital that something is done to combat a potential drought and the increasing storage need due to an increasing population.



RECOMMENDATIONS TO RAISE THE GRADE

- Completion of Emergency Action Plans (EAPs) for 100% of the high-hazard dams.
- Assess each dam's operational limitations and flexibility with regard to Idaho's water supply system to anticipate future challenges impacted by budgets, climate variability, and increasing population.
- Invest in technologies that promote rain and snowfall production and increase water storage to improve resiliency in the water supply.
- Continue allocating funds through the state department of water resources dam safety program for the continued inspection of impoundment structures to ensure public safety and to help with the allocation of funds in a prioritized and calculated matter.

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Drinking Water



GRADE
COMPARISON

ID: C+
Nat'l: C-



DRINKING WATER

EXECUTIVE SUMMARY

Idaho's 2,000+ public water systems, most of them small or rural, deliver safe drinking water but face mounting challenges from aging infrastructure, limited funding, and climate pressures. Nearly 70% of Idaho's \$1.7 billion drinking water need over the next 20 years falls on small systems with fewer ratepayers and limited staff. Federal funding has supported overdue upgrades, and the state is mapping lead lines, expanding asset management, and deploying smart monitoring tools. Still, concerns remain—aging pipes, capacity limits in fast-growing areas, PFAS contamination, and drought-related shortages. With most residents relying on groundwater, protecting quality and supply is critical. Idaho must invest in small systems, plan for climate extremes, and develop sustainable funding to ensure safe, reliable drinking water for all communities.

BACKGROUND

Drinking water infrastructure, including filtration plants, pipes, and pumps, work together to extract, sanitize, and distribute water to Idaho businesses and homes. This water infrastructure is managed and operated by a wide variety of owners, including homeowners' associations, businesses, nonprofit organizations, and local municipalities. The federal Safe Drinking Water Act (SDWA) authorizes the EPA to regulate public drinking

water systems. EPA works with the Idaho Department of Environmental Quality (DEQ) to protect air and water quality in the state and carry out SDWA provisions. DEQ functions as a regulatory agency and a partner with private and public-sector groups, local and tribal governments, businesses and industries, community organizations, and citizens.

CONDITION AND CAPACITY

Access to safe, reliable drinking water is fundamental to public health, economic development, and quality of life. Idaho's drinking water infrastructure comprises approximately 2,000 public water systems, serving about two-thirds of the state's population. The remaining one-third rely on private wells, which are not regulated under the SDWA.

Groundwater is the primary source of drinking water for 95% of Idaho residents, with the remaining 5% relying on surface water sources such as rivers, lakes, and reservoirs. Idaho's abundant aquifers provide relatively easy access to groundwater compared to other states. However, surface water sources, while more expensive to treat, offer flexibility in meeting peak demand periods.

Figure 1. Sawtooth Lake, Idaho



Much of Idaho's drinking water infrastructure was constructed in the mid-20th century, with many pipes and treatment facilities approaching or exceeding their intended design life of 75–100 years. Nationally, utilities average a pipe replacement rate of 0.5% per year, implying a 200-year replacement cycle—double the recommended timeframe. While specific data for Idaho is limited, anecdotal evidence suggests similar challenges, particularly in smaller and rural systems.

Small water systems, defined as those serving fewer than 3,300 people, constitute a significant portion of Idaho's public water systems. These systems often face unique challenges, including limited financial and technical resources, making it difficult to maintain compliance with SDWA standards and to fund necessary infrastructure improvements.

Non-revenue water (NRW)—water that is produced but

not billed due to leaks, theft, or metering inaccuracies—poses financial and resource challenges. While Idaho-specific NRW data is scarce, national averages indicate that utilities lose about 15% of their water to NRW. One major contributor to NRW losses is water main breaks. National surveys show an average of about 11 breaks per 100 miles of pipe annually. Idaho's water systems are generally newer than those in many older US states, but some communities still have mid-20th century cast iron mains that are more prone to failure. This suggests that Idaho's NRW losses may be in line with national averages. Reducing NRW is essential for improving system efficiency and financial sustainability.

Idaho continues to experience significant population growth, ranking among the fastest-growing states in the U.S. This growth places additional demands on existing water infrastructure, necessitating expansion and upgrades to ensure adequate capacity and reliability.

Figure 2.



Photo Credit: Tom

OPERATION & MAINTENANCE

Idaho's drinking water systems are operated by a diverse group of public and private entities—including municipal utilities, water districts, homeowner associations, and investor-owned utilities. These operators are responsible for day-to-day operations such as water treatment, pump station upkeep, distribution system monitoring, and storage maintenance. Effective operation and maintenance (O&M) is vital to ensure safe, uninterrupted service and to extend the lifespan of aging infrastructure.

O&M activities typically include routine flushing of pipes, valve and hydrant inspections, tank cleanings, leak detection, meter testing, pump servicing, and emergency repairs. Systems with comprehensive asset management plans are better positioned to conduct proactive maintenance, identify vulnerabilities, and allocate limited resources efficiently. However, many small and rural systems in Idaho operate with minimal staff and limited data, making maintenance largely

reactive rather than preventative.

Most systems in Idaho are funded through user-paid rates, which cover operations, maintenance, and minor capital improvements. However, water rate structures vary widely across the state. For example:

- Meridian charges a base fee of \$5.77 and \$2.00 per 1,000 gallons used.
- Boise charges a base fee of \$9.32 and \$5.93 per 748 gallons.
- Coeur d'Alene charges a base fee of \$10.33 and \$1.12 per 1,000 gallons.
- Idaho Falls remains one of Idaho's largest unmetered systems, charging a flat rate regardless of usage.

These differences reflect varying infrastructure needs, cost recovery strategies, and investment levels. In recent years, many utilities—including those in Coeur d'Alene, Idaho Falls, and Ada County—have raised rates to fund deferred maintenance and system upgrades.

Idaho's drinking water sector faces a growing workforce challenge. Operators are aging, and many smaller systems report difficulty attracting and retaining certified personnel. This shortage of qualified staff limits the ability to conduct regular inspections, respond to emergencies, and plan long-term improvements. The challenge is especially acute in rural areas, where staff often take on multiple roles and where training opportunities may be less accessible.

FUNDING

As in most states, Idaho's drinking water infrastructure is funded primarily at the local level, with system users covering nearly all operations, maintenance, and capital improvement costs. According to the U.S. Conference of Mayors, an estimated 95% to 98% of water infrastructure funding nationwide comes from state and local sources—not the federal government.

Many drinking water systems in Idaho—particularly small and rural ones—report that rate revenues are insufficient to fund long-term asset renewal and upgrades. While several Idaho utilities have raised rates in recent years to address deferred maintenance and system improvements, full-cost recovery remains elusive for many providers. In some cases, rates are kept artificially low due to political or public pressure, making it difficult to build reserve funds or invest in proactive improvements.

Utilities serving growing communities may face different challenges, such as oversized systems built to accommodate future demand. These systems often require higher upfront capital investment and increased operating costs, which can strain utility budgets when development occurs slower than projected.

The Drinking Water State Revolving Fund (DWSRF) is Idaho's primary federal funding channel for water infrastructure. Since the program's creation in 1997,

FUTURE NEED

Idaho's drinking water infrastructure faces growing demands due to a combination of aging systems, ongoing population growth, and increasing regulatory and resiliency expectations. Strategic long-term planning

and sustained investment are essential to ensure safe, reliable, and affordable drinking water for current and future residents.

Larger utilities in Idaho are increasingly implementing asset management systems to guide O&M decisions, optimize investment timing, and prioritize risk-based interventions. These systems enable utilities to move from reactive fixes to strategic planning. However, many small systems still lack the technical and financial resources to implement such tools, creating a growing gap in operational capacity and resiliency between small and large providers.

Idaho has received approximately \$255 million in federal capitalization grants. The program is administered by the Idaho Department of Environmental Quality (DEQ), with a 20% state match required to access funds.

In 2024, Idaho received significant federal support through the Infrastructure Investment and Jobs Act (IIJA):

- \$42 million for drinking water, wastewater and stormwater infrastructure upgrades; and
- \$28 million specifically targeted to lead service line identification and replacement.

These amounts are separate from American Rescue Plan Act (ARPA) funds, which Idaho has also allocated in part to water infrastructure.

While this funding is critical, it still falls short of Idaho's long-term needs. The EPA's 2021 Drinking Water Infrastructure Needs Survey estimates that Idaho requires \$1.7 billion in water infrastructure investment over the next 20 years. Of that, over \$1.2 billion is needed for small systems—the very systems least equipped to compete for competitive federal funding due to staffing, technical, or matching-fund limitations.

Recent IIJA awards represent a substantial increase in federal support compared to past years and mark a major step toward closing long-standing investment gaps, helping to accelerate long-deferred infrastructure upgrades.

Figure 3. Shoshone Falls, Idaho

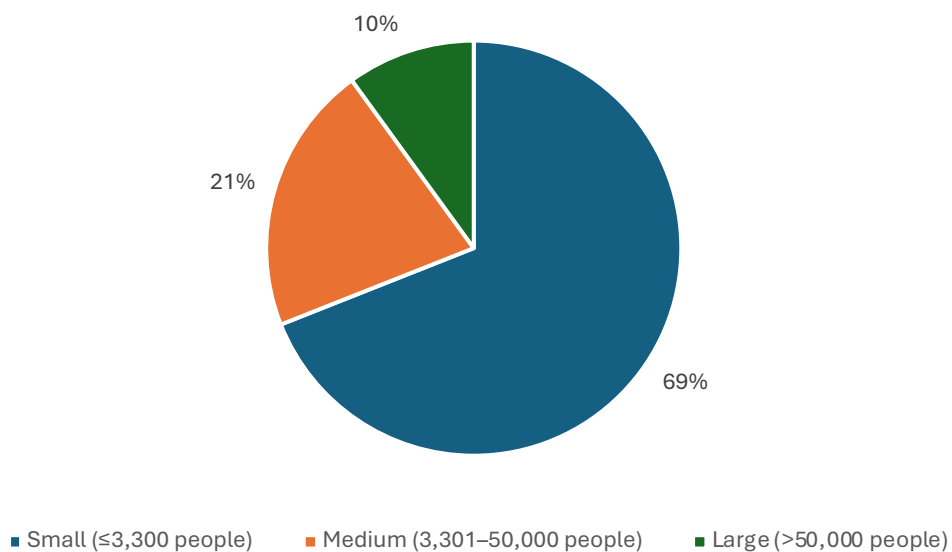


Photo Credit: Joseph Hill

According to the EPA's 7th Drinking Water Infrastructure Needs Survey and Assessment (2023), Idaho's 20-year drinking water infrastructure need is estimated at \$1.721 billion. This represents a substantial

increase from previous estimates and reflects the growing strain on Idaho's water systems. The breakdown of this need by system size is shown in Exhibit 1.

Exhibit 1. Drinking Water Infrastructure Funding Need



Small systems represent nearly 70% of Idaho's total infrastructure need—highlighting a key challenge in that the systems with the greatest need often have the least financial and technical capacity to access funding, manage projects, or comply with evolving standards.

Idaho remains one of the fastest-growing states in the nation, with a population increase of nearly 25% since 2010. This growth, concentrated in areas like the Treasure Valley, Kootenai County, and eastern Idaho, has placed increasing pressure on existing infrastructure and required rapid expansion of treatment, storage, and distribution systems.

To keep pace, utilities must:

- Build new facilities to meet growing demand;
- Extend service to newly developed areas; and
- Upgrade undersized or outdated infrastructure.

The cost of water infrastructure continues to rise

due to inflation in materials, labor shortages, stricter environmental requirements, and the need for greater climate resilience. Many Idaho systems—particularly small and rural utilities—lack long-term capital improvement plans and struggle to fund needed replacements or expansions in advance of failure.

Water systems built in earlier eras may also be oversized for current demand, especially in communities where projected growth has not materialized. These oversized systems can be costly to operate and maintain, further straining limited budgets.

Without sustained investment and planning, Idaho's growing communities risk more frequent service interruptions, regulatory violations, and costly emergency repairs. In recent years, however, the state has developed clearer documentation of capacity and funding barriers, creating a stronger foundation for targeted assistance and policy solutions.

PUBLIC SAFETY

Access to safe, reliable drinking water is a cornerstone of public health. Overall, Idaho's drinking water systems remain in strong compliance with the SDWA, and no recent widespread contamination events have been reported. However, emerging contaminants and public confidence in tap water quality present growing challenges that require continued investment and transparency.

DEQ oversees enforcement of the SDWA and works with public water systems on monitoring, operator certification, and system inspections. While most public systems are compliant, smaller systems remain most vulnerable to violations due to limited staffing and technical capacity.

Recent DEQ enforcement data shows that most significant violations occur in small or rural systems and are typically related to monitoring and reporting, rather than acute health threats. These issues still pose risks if left unaddressed, especially as regulatory standards tighten.

A 2024 study titled *Public Perceptions and Evaluations of Drinking Water Quality in Idaho* provides valuable insight into how residents view the safety of their water:

- The percentage of Idahoans who consider their tap water safe dropped from 90.2% in 1988 to 80.2% in 2022.
- The use of in-home water filtration systems has risen from 16.2% to 29.7% over the same time period, suggesting growing concern or caution.
- Bottled water consumption in Idaho peaked at 33% in 2010 but dropped to less than 11% by 2022.

These findings reflect a gradual erosion of public confidence, even in the absence of major safety incidents. This underscores the importance of public education and transparency—not just regulatory compliance—to maintain trust in public water systems.

Like many states, Idaho is preparing for increased regulatory scrutiny around lead service lines and PFAS (forever chemicals). Although Idaho has not experienced large-scale PFAS contamination to date, the EPA awarded the state \$28 million in 2024 through the IJJA to assist with lead service line inventory and replacement.

Idaho is taking a proactive approach to this work, mapping and preparing to replace lead service lines ahead of many states, reflecting stronger regulatory readiness and public health commitment.

State and local agencies are working to map lead components in older distribution systems, improve corrosion control, and build capacity to test for and respond to PFAS under the forthcoming federal Maximum Contaminant Levels (MCLs).

Overall, Idaho's public water quality remains strong, with no recent widespread contamination events and most systems consistently meeting federal standards, demonstrating resilience despite aging infrastructure.

Figure 4.



Photo Credit: Michael Jarmoluk

RESILIENCE AND INNOVATION

Idaho's drinking water systems are facing growing strain from shifting climate patterns, aging infrastructure, and increasingly complex operational demands. According to the 2022 Idaho State Climate Summary published by NOAA and the North Carolina Institute for Climate Studies, the state has warmed by nearly 2°F over the past century, and temperatures are projected to continue rising, with more frequent heatwaves and extended periods of drought. Meanwhile, annual precipitation is expected to increase overall, but with more winter precipitation falling as rain instead of snow, leading to reduced snowpack and earlier spring runoff. These shifts are already affecting water availability, especially during the late summer and early fall when demand is highest and reservoirs are lowest.

A 2023 regional climate assessment further warned that these trends—combined with increasing wildfire activity and variable streamflow—will place mounting stress on Idaho's natural and built water systems, particularly in mountainous and forested areas. Earlier and faster snowmelt, along with more frequent rain-on-snow events, can also raise the risk of localized flooding and sedimentation, which degrade water quality and overwhelm treatment systems.

For many communities, especially smaller or rural ones, these climate challenges compound existing infrastructure issues. Aging pipes, outdated treatment facilities, and limited redundancy leave systems vulnerable to both acute disruptions and long-term decline. Many utilities lack backup wells, interconnections, or updated emergency response plans, making it difficult to maintain service during drought, flooding, or equipment failures.

In response, several utilities are beginning to adopt resilience-focused practices. Larger systems like those in

Boise and Coeur d'Alene are deploying GIS-based asset management, remote leak detection, and automated metering infrastructure (AMI) to improve efficiency and system awareness.

Some are diversifying supply by integrating surface and groundwater sources to better respond to seasonal variability and source stress. Others are evaluating infrastructure upgrades—such as updated intakes, emergency generators, and more climate-resilient treatment components—as part of their long-range capital improvement planning.

A key resilience milestone is Idaho's work on lead service line inventories and replacement, supported by \$28 million in EPA funding through the IIJA in 2024. While Idaho is not among the states with high lead pipe prevalence, it is taking a proactive stance by mapping older service lines and engaging local systems early to prepare for compliance with the revised Lead and Copper Rule. Similarly, as new standards emerge for PFAS and other contaminants, many utilities are beginning to build monitoring capacity and explore treatment options in anticipation of more stringent regulatory requirements.

Innovation is also emerging in how utilities approach finance and operations. While cutting-edge tools like predictive analytics or AI-driven maintenance are still rare in Idaho's smaller districts, larger agencies are paving the way for more data-informed decisions and regional cooperation. System consolidation, shared staffing, and coordinated grant applications are slowly becoming more common strategies to stretch limited resources, especially in low-capacity areas. These trends signal growing momentum toward advanced technology adoption, stronger regional partnerships and proactive regulatory readiness.



RECOMMENDATIONS TO RAISE THE GRADE

To address the funding gaps, operational vulnerabilities, and climate-related challenges facing Idaho's drinking water systems, decision-makers at all levels should consider the following actions:

- **Expand Technical and Financial Support for Small Systems**
Idaho's small water systems face the greatest infrastructure needs but often lack the capacity to secure funding or meet regulatory requirements. Expanding technical assistance can help these providers plan capital improvements, inventory lead lines, and access programs like the DWSRF. Regional partnerships, shared staffing, and system consolidation should be encouraged where feasible.
- **Encourage System Consolidation and Regional Collaboration**
Where feasible, connecting or partnering with nearby systems can improve efficiency, reduce costs, and strengthen service reliability. Regional approaches can also help share specialized staff and resources.
- **Maintain Stable Funding and Adopt Sustainable Rate Structures**
Long term, predictable access to federal and state infrastructure funding, paired with locally sustainable rate structures, allows utilities to recover full lifecycle costs, reduce deferred maintenance, and invest in needed upgrades while maintaining affordability.
- **Strengthen Resilience and Emergency Preparedness**
More frequent droughts, floods, and other extreme events require water systems to update emergency plans, protect source water, secure backup power or supply options, and incorporate climate informed design standards.
- **Invest in Data, Monitoring, and Innovation**
Tools such as GIS mapping, leak detection, automated meter reading (AMI), and real time monitoring can reduce water loss and improve operational efficiency. Pilot programs, shared software platforms, and regional procurement models can help make these technologies affordable for small systems.



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Energy



GRADE
COMPARISON

ID: C+

Nat'l: D-



ENERGY

EXECUTIVE SUMMARY

Idaho's rapid population growth is placing new demands on its energy infrastructure, but the state benefits from a strong renewable base—more than two-thirds of electricity comes from renewables, primarily low-cost hydropower. This keeps utility rates among the lowest in the nation, attracting commercial and industrial investment. Idaho's three largest utilities have pledged to deliver 100% clean energy within 25 years, and the state has strong potential for wind, solar, and geothermal development, particularly in the south. Transmission upgrades will be key to connecting new generation to users. Utilities are also adopting wildfire-resistant designs and safety measures. Continued investment in generation, storage, and grid modernization will be essential to keep Idaho's energy reliable, affordable, and resilient.

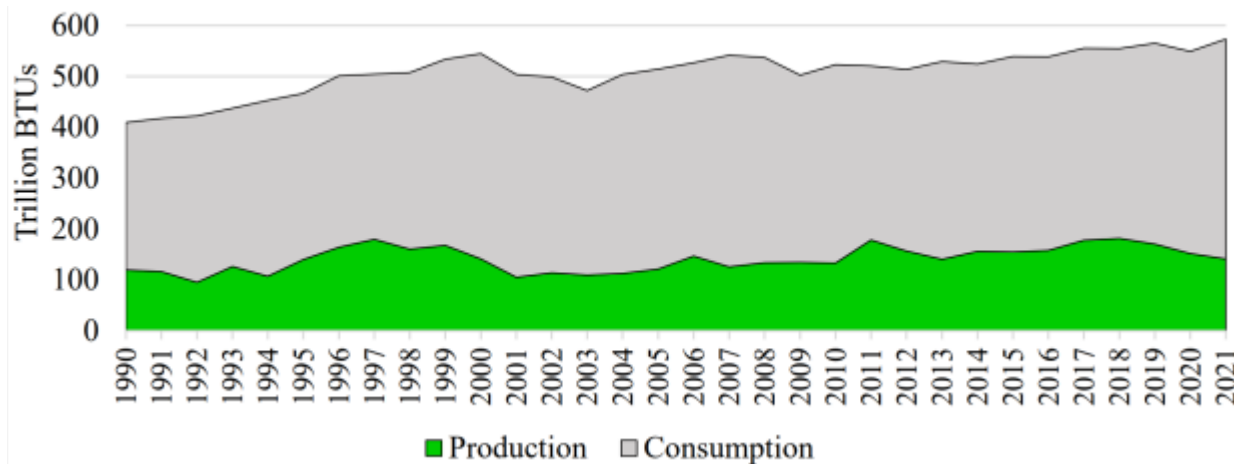
CAPACITY

In 2018, during the previous report card cycle, it was estimated that Idaho's population would reach 1.9 million by 2025. Idaho surpassed the 1.9-million-person mark earlier than anticipated, in 2021, due to a large migration of people from nearby states during the coronavirus pandemic that began in 2020. Idaho's population as of March 2024, is estimated to be 1.99 million people. Current statistics indicate the recent population growth has slowed but this sudden influx in population has caused an increase in energy consumption. Currently, Idaho consumes nearly four times more energy than it produces.

This reliance on external sources for energy production underscores the state's need for well maintained and monitored transportation infrastructure. This includes pipelines, railroads, highways, and transmission power

lines. Major transmission power line projects have already been moved forward by Idaho investor-owned utilities in an effort to improve this including the joint 500kV project Boardman to Hemmingway (B2H) between PacifiCorp, BPA, and Idaho Power, the joint 500kV project Gateway West (GWW) between PacifiCorp and Idaho Power, and the 500kV project Southwest Intertie Project-North (SWIP North by LS Power). Data centers have also played a role in shaping Idaho's energy landscape, driving demand for high-capacity, reliable electricity and accelerating the need for infrastructure upgrades. Their rapid expansion, particularly in southern Idaho, has placed additional pressure on transmission systems and contributed to the urgency of long-term energy planning.

Idaho Energy Production and Consumption, 1990-2021



Source: the Idaho Governor's Office of Energy and Mineral Resources (OEMR)

CONDITION, OPERATION, AND MAINTENANCE

New generation and transmission projects are being designed and constructed each year in the state. Idaho's utility companies generally maintain their existing infrastructure through continued prioritized maintenance and capital improvement programs, resulting in systems that are generally in good condition. Like most of the infrastructure in the nation, much of Idaho's energy infrastructure is nearing its original design life. Regular maintenance is essential to extending the useful life of infrastructure and is far more cost-effective than rebuilding new facilities. As regulations continue to change and costs continue to rise, rebuilding this vital infrastructure will only become more difficult. An important factor influencing the pace and efficiency of maintenance is the permitting process. While necessary to ensure environmental and community standards are met, permitting can introduce delays that affect utilities' ability to carry out timely upgrades and repairs. Recognizing and addressing these procedural challenges will be key to supporting Idaho's long-term energy reliability and resilience.

Idaho's Renewable Portfolio Standard (RPS) was 75% in 2022, the 4th highest in the nation behind Vermont, South Dakota, and Washington.

Approximately 84% of Idaho's energy consumers are served by three investor-owned electric utilities (Avista Corporation, Idaho Power Company, and PacifiCorp/Rocky Mountain Power). The remaining 16% are served by 29 municipal utilities and rural electric cooperatives.

- Avista Corporation is an investor-owned electric and natural gas utility headquartered in Spokane, Washington, serving over 141,000 electric customers in northern Idaho, Washington and Oregon. Electric customers receive a mix of hydroelectric, natural gas, coal, biomass, and wind generation delivered over 2,800 miles of transmission line and 19,300 miles of distribution line. Approximately half of Avista's electricity in the winter comes from hydropower resources. Natural gas is provided to more than 92,000 customers through more than 8000 miles of pipelines. Avista has a portfolio of hydroelectric resources located in western Montana, eastern Washington, and north Idaho; ownership shares of Montana coal plants are scheduled to cease in 2025; and natural gas-fired baseload and capacity in Idaho, Oregon, and Washington.
- Idaho Power Company serves 630,000 customers in southern Idaho and eastern Oregon across a 24,000-square mile service territory. The number

of Idaho Power customers is expected to increase to over 855,000 by 2043. Idaho Power is the largest provider of electricity in the state. Idaho Power owns and operates 17 hydroelectric projects, 3 natural gas-fired plants, 1 diesel-powered plant, and shares ownership in 2 coal-fired facilities. Idaho Power's supply-side portfolio includes long-term contracts with several large wind and solar projects, two geothermal projects and numerous small-scale independent power producers. As of June 2017, Idaho Power had contracts with 133 independent generation facilities that were online with a combined nameplate capacity of 1,211 MW.

- PacifiCorp serves retail customers in six western states: Washington, Oregon, Idaho, Wyoming, Utah, and California. Rocky Mountain Power, a division of PacifiCorp, serves 82,000 customers in Southern Idaho (approximately 4% of PacifiCorp's total

customer base). Wind, hydro, geothermal, and other non-carbon-emitting resources currently make up approximately 39% of PacifiCorp's owned generating capacity. As of March 2023, PacifiCorp had 2,935 megawatts of owned wind generation capacity, more than double the capacity since the last report card.

- There are 29 rural electric cooperatives and municipalities providing electric service in Idaho. These utilities serve more than 140,000 customers throughout Idaho, accounting for 16% of Idaho's load. The Bonneville Power Administration supplies over 96% of the wholesale electric power to the municipal and cooperative utilities. All rural electric cooperatives and municipalities in Idaho deliver electricity to customers "at cost." Most of these utilities collaborate under the Idaho Consumer Owned Utilities Association on issues of administrative, governmental, and regulatory significance.

Idaho's Renewable Portfolio Standard (RPS) was 75% in 2022, the 4th highest in the nation behind Vermont, South Dakota, and Washington.

PUBLIC SAFETY AND RESILIENCE

Between 2008 and 2017 the leading cause of power outages was weather or falling trees which is on par with the national leading cause. The average electric customer experienced 1.2 outages in 2018 that lasted on average less than 1 hour. The leading cause of overall property loss between 2009 and 2019 in the Idaho has been wildfires at roughly \$51 million per year. In 2022, the Office of Energy and Mineral Resources Idaho Energy Resiliency Grant Pilot Program awarded funds to Idaho Power for the implementation of fire wrap around the base of wood pole power line structures. These fire wraps quickly proved successful when they protected these structures from multiple forest fires that occurred in 2023. With the expectation that wildfires will likely worsen with the changing climate, utilities have begun discussing Public Safety Power Shutoffs (PSPS) that would turn off power in areas where wildfire risk is high due to extreme weather. The purpose of these events is

to keep the customers, communities, employees, and equipment safe. Utilities are also beginning to develop fire resistant designs when building new infrastructure, with steel structures on high voltage power lines being a recent example of this.

Redundancy and diversity in the electrical grid also prove beneficial in promoting a more resilient system. The North American Electric Reliability Corporation (NERC) splits the grid of the US and Canada into four main interconnections, with Idaho existing in the Western Interconnection. This Western Interconnection allows for transmission of additional consumption or generation to promote reliable and cost-effective electricity. This vast interconnection is monitored by the Western Electricity Coordinating Council (WECC). The 500kV transmission line projects discussed in the capacity section of this report will only add to the resiliency of the overall power grid.

FUNDING

The primary source of funding for energy in Idaho comes from a combination of local, state, and federal funding programs as well as private utilities through the process of rate increases based on rising cost, maintenance, and renewable energy contracts. Idaho has the second lowest electricity rates in the nation (8.51 cent/kWh) as of 2022. The investments made through the Infrastructure Investment and Jobs Act (IIJA) have and will continue to support the reliability and efficiency of the Idaho energy sector. The Idaho Governor's Office of Energy and Mineral Resources has utilized funds through the IIJA to award more than \$12 million to 12 electric utilities, supporting 23 projects, which triggered another \$9 million spending by the utilities on these projects. The U.S. Department of Energy (DOE) utilized funding as part of the Transmission Facilitation Program (TFP) to select SWIP North for a capacity contract, providing the

DOE with a percentage of the transmission line capacity once constructed. SWIP North aims to connect the reduce congestion on the western grid and enable export of excess solar capacity from the Southwest of the United States.

The low cost of Idaho's electricity can be directly related to the existing clean hydro generation infrastructure and low likelihood of natural disasters that require costly rebuilding and maintenance on existing infrastructure. Investments into Idaho's economy by large companies to capitalize off of this have already begun and is expected to continue. Rates are expected to increase over time, but energy efficiency programs and advancements in generation capabilities can help mitigate these anticipated increases in cost and consumption on the system. Additional generation capacity will need to be considered and constructed to support this.



FUTURE NEED

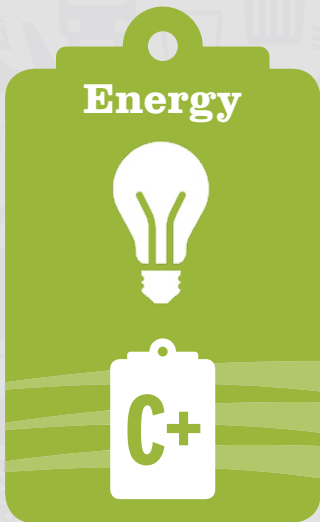
Idaho's low energy cost in relation to other states has identified it as a viable option for large commercial and industrial development. As companies begin to expand in the state and population continues to increase alongside, energy consumption will only trend upwards. This will be compounded by the decarbonization goals set by many energy generation producing entities as well as the trend towards electric vehicles as a common household means of transportation. This increased need and continually aging infrastructure can be met by utilities practicing reasonable operational and maintenance practices, as well as educating consumers on how to use energy in a more efficient matter. Large transmission projects and maintenance projects are underway to support growth and maintain current needs, allowing for peaks and valleys in energy consumption to be reduced by a geographical intertie system between states and utilities.

INNOVATION

The three largest utilities on Idaho have made commitments to generate 100% clean energy for its consumers within the next 25 years. This promise will require many new renewable generation facilities to be developed in stride with the increase in energy consumption. Hydroelectricity currently makes up the largest portion of existing carbon free generation sources at roughly 49% of Idaho's in state electricity production. Hydroelectric pump storage projects that use gravity as a battery are expected to pop up on the system over time as an innovative solution to clean generation sources. Recent renewable energy generation sources are currently less cost effective than utility owned traditional sources like hydroelectricity, but the cost difference is expected to decrease over time. Utility scale solar power have gone from an estimated 249 MWs in 2016 to 825 MW as of September 2023. Wind

Utilities in Idaho have led the way in identifying the future increase in the Idaho Energy Sector through the production of Integrated Resource Plans (IRPs) that must be submitted to the Idaho Public Utilities Commission (PUC) every other year. The purpose of these plans is to forecast demand over the next 20 years and identify cost effective ways to meet that demand. Avista projects an annual growth rate of 0.86% annually in the electricity sector and 1.1% annually in the natural gas sector. Idaho Power is estimating 6.7% annual customer increase and 7.0% annual peak load increase. PacifiCorp/Rocky Mountain Power is projecting a 1.8% increase in residential customers and a 1.2% increase in commercial customers. Intermountain Gas Company is estimating between 1.1% and 3.1% annual growth per year over the next five years.

production has increased 1,184% from 2008 to 2021 and accounts for roughly 17% of Idaho's electricity sources. Biomass electricity is responsible for providing less than 5% of Idaho energy consumption. Geothermal energy is a reliable 24-hour use resource that is currently used in the state and is expected to advance in scale with southern Idaho as a viable location for this. Nuclear power is not directly produced in the state of Idaho but is purchased through market resources on the electrical grid. PacifiCorp plans to add 500 MW of nuclear power by 2030 according to its 2023 IRP. Small scale modular reactors are currently being researched at Idaho National Laboratories (INL), the nation's leading laboratory for nuclear energy research. It is theorized that these may shape the future of nuclear energy across the globe.



RECOMMENDATIONS TO RAISE THE GRADE

- Idaho's energy needs will need to be met by continual growth of generation and funding into the transmission infrastructure, as well as an increase in energy storage and distribution smart grids.
- Idaho should continue to leverage its resources to support growth in energy generation, particularly by expanding opportunities in the renewable sector such as geothermal, solar, and wind.
- Continued investment in resiliency, public safety power shutoffs, and cyber security will become increasingly important to protect Idaho's energy generation and distribution facilities.
- Collaborate across state, local, and federal agencies to improve permitting timelines and reduce barriers to infrastructure maintenance and development.

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Roads



GRADE
COMPARISON

ID: C
Nat'l: D

Photo: Unpaved Roads in Greencreek, Idaho; Lauren Nuxoll Davis



ROADS

EXECUTIVE SUMMARY

Idaho's road network is increasingly strained by population growth, aging infrastructure, and limited local funding. While 87% of state highways are in good or fair condition, nearly half of local roads—many of them unpaved—are deteriorating due to deferred maintenance. Congestion is growing in both urban areas like the Treasure Valley and rural corridors. Roadway fatalities hit a 20-year high in 2023, with 275 deaths. ITD's "Zero Deaths" initiative and targeted safety projects are helping, but resilience is a growing concern as flooding, wildfires, and landslides affect key routes with limited detour options. Innovative tools are emerging in larger cities, but smaller agencies often lack capacity. Sustainable funding and statewide coordination are critical to ensure safe, connected, and resilient roads.

Figure 1. Traffic along I-84 in Boise, Idaho



Photo Credit: Kittelson & Associates, Inc.

CAPACITY

Idaho's population is projected to grow by about 20% by 2040, adding pressure to an already strained transportation system. While much of the network currently operates with available capacity, recurring congestion and reliability issues are emerging in several urban areas – most notably in the Treasure Valley, Coeur d' Alene, Idaho Falls, Pocatello and Twin Falls.

Although Idaho is no longer the fastest-growing state in the nation, it remains in the top ten, with growth consistently outpacing the national average. Without targeted investments in roadway capacity and system efficiency, these growth trends are expected to further strain the transportation network, impacting personal travel, freight movement, and overall safety.

Figure 2. City of Lewiston, Idaho



Photo Credit: Kittelson & Associates, Inc.

Resilience is an emerging priority as flooding, wildfires, and landslides disrupt key routes. Many communities lack detour options, and improving redundancy is essential for long-term system reliability.

to focus on basic maintenance, leaving little for capacity expansion. As rural communities near urban centers grow, congestion is appearing on rural collectors and arterials, especially during morning and evening peaks.

The state highway system is also under pressure. Urban corridors, like in the Treasure Valley, face persistent high volumes despite recent investments, such as interchange reconstructions and lane additions on I-84 and other regional highways. The ongoing extension of State Highway 16 through Meridian aims to relieve congestion on parallel routes. Similar strains are developing on state routes serving Coeur d'Alene, Idaho Falls, and Twin

Falls. Rural highways that carry heavy seasonal tourism traffic also face capacity constraints, but steep terrain, environmental sensitivities, and limited right of way make widening projects costly and complex.

While federal and state funds have enabled targeted improvements, sustained investment will be essential to maintain performance and meet future demand. Addressing capacity will require not only roadway expansions but also improved system management and multimodal options—including sidewalks, bicycle facilities, and transit enhancements—that can reduce demand on vehicle lanes and improve mobility for all users.

Figure 3. Traffic Congestion in Nampa, ID.



Photo Credit: Kittelson & Associates, Inc.

CONDITION

Maintaining Idaho's diverse roadway network remains a complex task due to the state's varied climate, topography, and multiple highway jurisdictions. While ITD and local agencies have made commendable efforts to preserve and restore existing roads, they face increasing demands and persistent funding challenges, especially as the state experiences continued population growth and economic development.

Idaho's local transportation system includes approximately 35,000 miles of roadway—over 70% of the state's public road network—maintained by counties, cities, and highway districts. Roadway conditions vary widely depending on terrain, climate, and available local funding. Agencies in low revenue jurisdictions, areas with smaller tax bases and limited ability to generate local transportation revenue, often struggle to keep pace with preservation needs. Without a current statewide condition assessment, local agency reports indicate that a substantial share of paved local roads are in fair or poor condition, especially in rural areas with fewer resources for upkeep.

While targeted grants, such as the Leading Idaho Local

Bridge Program and the Local Strategic Initiatives Program, have funded specific local improvements, Idaho lacks a consistent, long-term funding mechanism to maintain the overall condition of its vast local roadway network.

On the state side, as of 2025, ITD operates and maintains approximately 12,300 lane miles of state highways and 1,841 bridges. Using their pavement management system (PMS) to evaluate pavement conditions based on cracking, roughness, and rutting indices, ITD reports that 87% of state highway pavements are rated in good or fair condition as of April 2025, exceeding the department's goal of at least 80%. This success is largely the result of ITD's continued investment in preventative maintenance strategies, including seal coats, overlays, and minor rehabilitations.

Despite these gains, challenges remain. Urban corridors are under increasing pressure from congestion, while rural highways, particularly those serving seasonal recreation areas, face wear from traffic volumes and severe weather. In addition, terrain and right-of-way constraints further complicate improvement efforts in some areas.

FUNDING AND FUTURE NEED

Idaho has made progress in transportation funding through legislation and strategic investments. However, rapid population growth and expanding infrastructure needs continue to outpace available resources, underscoring the necessity for sustainable, long-term funding.

The Infrastructure Investment and Jobs Act (IIJA) provides Idaho with an estimated \$2.2 billion over five years in federal highway and bridge formula funding, in addition to competitive grants opportunities. In FY 2025, ITD's total appropriation was approximately \$592 million, with about one third coming from federal sources. This funding supports highway operations, construction contracts, and right of way acquisition.

To accelerate delivery of critical capacity projects, Idaho has leveraged the Transportation Expansion and Congestion Mitigation (TECM) program—a bonding mechanism that uses dedicated sales tax revenue to back long term debt for major projects. By early 2025, the state had completed its final TECM bond sale, generating approximately \$350 million and contributing to more than \$1.3 billion in total TECM bond revenue. These funds have been directed toward priority projects such as I 84 widening and the State Highway 16 corridor expansion. In addition, House Bill 362 (2021) redirected \$80 million annually in existing state funds to support bonding authority of up to \$1.6 billion for highway related infrastructure, the largest infrastructure package in Idaho history.

Figure 4. Idaho's TECM Projects

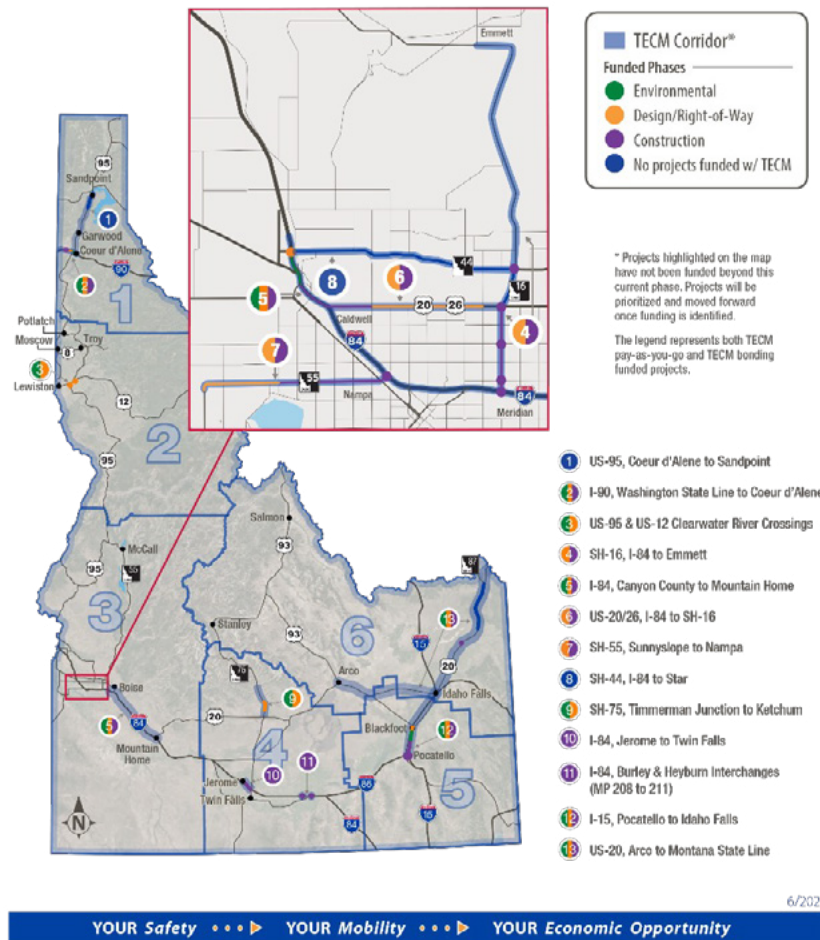


Photo Credit: Idaho Transportation Department

Local jurisdictions remain financially constrained. In 2023, the Legislature allocated \$100 million for economically significant local projects, administered through the Local Strategic Initiatives Program. The Leading Idaho Local Bridge Program has also provided \$200 million to repair or replace aging local bridges. While these programs help address critical needs, they are typically allocated for specific fiscal years and are not guaranteed as recurring funding streams.

Even with these advances, a 2020 analysis by the Idaho Policy Institute estimates Idaho needs an additional \$241.8 million annually to maintain and operate its current transportation system. This figure does not account for expansion or safety-related improvements. Limited local revenue authority and difficulty meeting

federal match requirements further constrain maintenance and improvement efforts.

Idaho's approach to Surface Transportation Block Grant (STBG) Program funding creates equity concerns. Idaho is one of nine states that does not suballocate STBG funding according to the Federal Highway Administration's (FHWA) computational tables. As a result, areas with populations between 5,000 and 200,000 represent 46% of Idaho's population but receive only 30% of STBG funds. Rural areas under 5,000 people receive 45% of funding but represent only 31% of the population. This imbalance contrasts with 39 other states that follow FHWA suballocation methods, which more proportionally distribute funding to small and mid-sized communities.

PUBLIC SAFETY

Recent years have seen a rise in traffic-related fatalities on Idaho's roadways, emphasizing the need for continued investment in infrastructure safety.

In 2023, Idaho experienced its deadliest year on the roads in two decades, with 275 traffic fatalities, marking a 28% increase from 194 deaths in 2022. Based on Idaho's 2023 population, this equates to approximately 14.0 fatalities per 100,000 population, slightly above the national average of 12.2. The increase in fatalities in 2023 is linked to a combination of risky driving behaviors and roadway conditions. Impaired driving was a factor in more than one-third of all deaths, while aggressive driving behaviors such as speeding and unsafe passing contributed to over half of fatal crashes. Many of these involved vehicles leaving the roadway, a crash type that is especially deadly on Idaho's rural, high-speed roads.

Pedestrians and bicyclists remain among the most vulnerable road users. In 2023, 14 pedestrian and 3 bicyclists were killed, accounting for about 6% of all roadway deaths in Idaho. These fatalities often occur on major arterial roads, where higher speeds and limited pedestrian or bicycle infrastructure increase crash risk.

Common contributing factors to crashes on local roads include inadequate access management (too many uncontrolled driveways or street connections that create conflict points), poorly designed intersections, and limited pedestrian and bicycle infrastructure. Enhancing safety on local roads requires targeted investments in measures such as better signage, lighting, sidewalks, bicycle lanes, intersection redesign and road surface improvements including repaving and re-engineering geometry to promote safe driving behaviors.

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To address these safety concerns, ITD is advancing a multi-pronged strategy that includes infrastructure upgrades, targeted enforcement, and public education under the "Zero Deaths" initiative, which envisions eliminating all traffic fatalities and serious injuries in Idaho. Recent projects include improvements to signage, access control, and visibility on the Eagle Road Safety Corridor (SH-55), resurfacing and shoulder improvements on a mountainous stretch of SH-55, and a major realignment of US 95 between Lewiston and Moscow.

Figure 5. ITD's Toward Zero Deaths Logo



Figure 6. US 95 Realignment from Moscow to Lewiston.



Photo Credit: Idaho Transportation Department

OPERATION & MAINTENANCE

Operation and maintenance (O&M) activities are the foundation of a safe and reliable transportation system. These include routine pavement patching, snow and ice control, guardrail and sign repair, drainage system upkeep, vegetation management, striping, litter removal, and emergency response. In Idaho, responsibility for O&M is shared between ITD and local highway jurisdictions.

From 2019 to 2023, annual vehicle miles traveled in Idaho grew from 17.7 billion to 19.2 billion, increasing pressure on ITD's crews and equipment. The department must maintain more lane miles, accommodate more wear and tear, and respond to freeze-thaw cycles, wildfire-related debris, and flooding in rural corridors.

As infrastructure ages and traffic volumes rise, the frequency and scope of required maintenance also increase. In FY 2025, the legislature appropriated \$41.1 million specifically for highway operations, including personnel, supplies, and direct maintenance costs. While this supports a robust maintenance program, inflation in materials (e.g., asphalt, diesel, deicing chemicals) and an aging fleet of maintenance vehicles continue to increase costs. Additional factors include wear and tear, climate impacts, and the growing complexity of managing both rural and urban networks. Snow and ice removal can consume over one-third of district-level O&M budgets in high-elevation areas.

Figure 7. Plowing Idaho Roads



Photo Credit: Idaho Transportation Department

Proactive, well-funded, adaptive maintenance strategies are increasingly critical.

O&M strategies and costs vary significantly across the state due to geography. Rural mountain communities may receive dozens of feet of snow annually, requiring heavy investment in plowing and sanding. Urban areas such as the Treasure Valley experience less severe winters but must address high traffic volumes and the resulting pavement deterioration, congestion-related wear, and demand for year-round striping and signal maintenance.

Many local agencies operate with lean staffs and limited equipment. Maintenance personnel often handle many responsibilities, and smaller jurisdictions may share resources across county lines to respond to storm damage or emergency repairs.

State initiatives have provided some relief for local maintenance needs. In 2023, the Legislature approved \$100 million for local road projects as part of the state's transportation funding package. In 2024, the "Idaho Works" initiative proposed significant new transportation investments, including directing a portion of ongoing

maintenance funds to local jurisdictions. While these efforts help, most local agencies still face deferred maintenance backlogs. Routine tasks such as gravel road regrading, culvert replacement, and shoulder repair are often delayed due to lack of funding, leading to costlier fixes later.

To manage these challenges, ITD prioritizes high-traffic or high-risk corridors, integrates technology such as Road Weather Information Systems (RWIS) (which provide real-time conditions to guide snow and ice control) and decision support tools, and applies preventative treatments such as crack sealing and chip sealing. Some RWIS data is also shared with the public through ITD's 511 Traveler Information system, allowing drivers to check current road and weather conditions before traveling.

Without consistent and flexible funding, state and local agencies will struggle to maintain safe, reliable roadways, especially where winter severity, flooding, or agricultural trucking place heavy strain on aging infrastructure.

RESILIENCE

Resilience is critical in Idaho due to vast rural geography, mountainous terrain, and increasing frequency of extreme weather events. While major infrastructure collapses have been avoided in recent years, roadway washouts, landslides, and flood damage are becoming more frequent and costly. Limited route redundancy in many regions exacerbates these vulnerabilities, prompting state and local agencies to invest in proactive, long-term strategies to preserve access, minimize disruption, and protect economic and public safety outcomes.

Natural hazards are especially pronounced in central and northern Idaho, where highways traverse steep canyons, heavily forested terrain, and flood-prone valleys. Recent incidents, such as the 2020 rockslide on US 95 near Riggins, 2023 washout on SH-55 near Paddy Flat and the 2025 landslide on US 95 north of Council, both caused weeks-long closures and exposed the vulnerability of these corridors.

Figure 8. 2020 Rockslide on US 9



Photo Credit: Lauren Nuxoll Davis

Figure 9. 2023 washout on SH 55



Photo Credit: McCall Police Department

Much of rural Idaho lacks network redundancy, meaning alternate routes to absorb traffic during closures are rare. In many areas, a single highway connects entire communities to emergency services, schools, freight corridors, and economic hubs. When one of these corridors becomes impassable, detours of 80 to 120 miles are common, resulting in multi-hour delays or temporary isolation of communities. While urban areas typically have greater route flexibility, rural regions remain highly vulnerable.

Beyond redundancy planning, Idaho agencies are updating design standards and construction methods to better withstand extreme events. ITD integrates slope stability and drainage vulnerability mapping into project scoping for mountain corridors, applies updated bridge scour standards in flood prone areas, and installs rockfall

catchment systems in high risk zones. New roadway and bridge designs feature larger culverts, raised grades for flood protection, stronger snow and avalanche barriers, and more durable pavement in freeze-thaw areas. The Leading Idaho Local Bridge Program and federal funds prioritize replacing older structures with designs that meet current AASHTO extreme event criteria.

Resilience planning also includes prioritizing key snow routes, improving emergency response protocols, and collaborating with counties to improve gravel or local roads for use as temporary detours. Idaho participates in federally supported vulnerability assessments to help guide investments towards the most critical and hazard-prone corridors.

INNOVATION

Idaho's transportation agencies are incorporating new technologies and practices that improve efficiency, safety and the long-term sustainability of the state's transportation system. While many of these tools are relatively new, early results show measurable benefits in cost savings, safety performance and operational efficiency.

- **Innovate ITD!** - Since 2014, ITD's employee-driven program has generated more than 1,500 implemented innovations, saving over \$61 million and reclaiming nearly 670,000 staff hours.
- **Digital Project Deliver** - Agencies are moving to e-Construction platforms, digital plan sets and field tablets. Though Idaho specific performance data is still emerging, national benchmarks suggest that digital workflows can reduce rework, cut administrative delays, boost productivity by up to 15%, and reduce costs by 4-6%. Electronic ticketing and digital as built integrations also enhance safety by minimizing on-site exposure and simplifying inspections.
- **Smart Transportation Research** - The Idaho Smart Transportation Lab (ISTL), in partnership with the University of Idaho, advances applied research on connected vehicles, smart intersections, and real-

time work zone warning with pilot deployments in the Treasure Valley and Moscow. While Idaho specific performance data from these trials is not yet publicly available, national research on similar technologies has shown measurable benefits, including reduced intersection crash risk, lower emissions, and decreased traffic delay.

- **GIS-Driven Asset Management** - Local agencies including ACHD and highway districts in Canyon and Kootenai counties leverage GIS-based inventories of pavement, culverts and roadside assets. These tools enable data-driven prioritization, helping stretch maintenance budgets further and extend asset lifespan.
- **Adaptive Traffic Signals** - Boise and Twin Falls are expanding radar- and camera-based detection systems that dynamically adjust green times based on real-time traffic flow. Early estimates show travel time reductions of nearly 20% along a pilot corridor in Boise.

Continued investment in workforce training, cross-jurisdictional coordination, and technology planning can expand innovation capacity and ensure statewide benefits from emerging tools and methods.



RECOMMENDATIONS TO RAISE THE GRADE

- Establish a stable, long-term funding mechanism for local roads.
- The state should implement a consistent and flexible funding source—such as local-option taxes or a reformed revenue-sharing model—that allows cities, counties, and highway districts to plan long-term maintenance and rehabilitation.
- Prioritize rural detour route improvements, including gravel upgrades and bridge replacements, to maintain access for freight, emergency services, and community travel.
- Support local agencies in developing or refining data-driven asset management systems for timely chip sealing, overlays, and minor rehabilitation before roads degrade into full reconstruction needs. Increased GIS tracking and funding for preventative work will reduce long-term costs.
- Continue to leverage programs like TECM to deliver targeted capacity upgrades in high-growth corridors while integrating multimodal design and safety features



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Schools





SCHOOLS

EXECUTIVE SUMMARY

High-quality school facilities are essential to student learning, yet Idaho's investment in school infrastructure remains low. In FY2021–2022, the state spent about \$760 per student on operations and maintenance—well below the \$1,300 national average. While some districts have used local levies to fund new construction, many schools remain outdated or in disrepair, especially in fast-growing areas. Since 2016, Idaho has lost 40 public schools, even as enrollment is projected to rise by 5% or more through 2028. Physical infrastructure is often left out of statewide education funding discussions, leaving districts to shoulder costs unevenly. The result is overcrowding, deferred maintenance, and facilities that fall short of safety, technology, and accessibility standards. Without dedicated, long-term funding, school infrastructure needs will continue to grow – widening disparities and limited student opportunities.

BACKGROUND

Researchers have found that students in deteriorating school buildings score between 5-11 percentile points lower on standardized achievement tests than students in modern buildings. K-12 school facilities are the second largest public infrastructure investment after transportation in the United States. While there is a fair amount of data, there is no consistent, representative reporting on public school infrastructure in Idaho. This makes the ongoing maintenance, funding, planning, and construction of Idaho's public schools more of a challenge.

As part of the effort put together in the 2024 Report Card for Idaho's Infrastructure, an email survey was sent to all public school superintendents, including charter schools (those receiving public funds), across the state. We asked the superintendents to assess various physical facilities of their respective school districts. The respondents represented approximately 13% of the student enrollment in the state, which gives only a snapshot of the current environment.

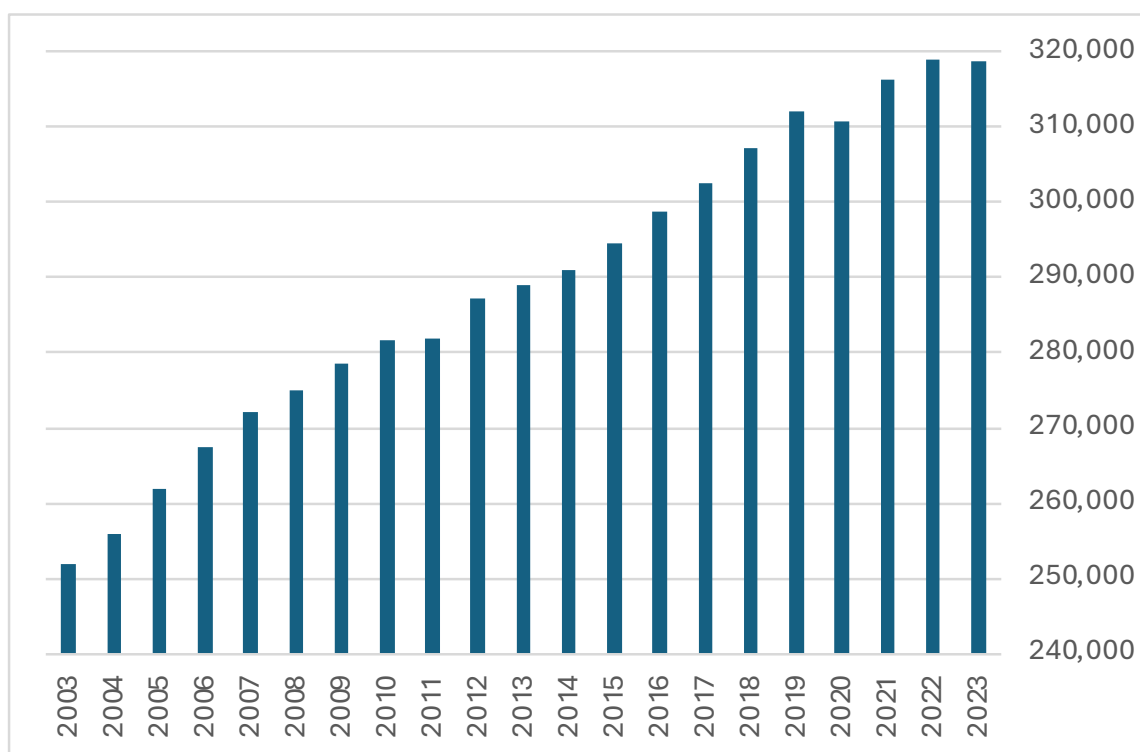
CAPACITY AND CONDITION

As population in Idaho continues to increase, the strain on the capacity of the public school system will increase proportionally. There were 117 K-12 public school districts containing 705 public schools in 2022-2023, 40 fewer public schools than in 2016. Idaho Department of Education Public School Finance data shows student enrollment was 316,159 and schools employed 21,991 teachers in 2022 for a pupil/teacher ratio of 14.37. In

the 2023-2024 school year, student enrollment rose to 318,660, up 8.2% from 294,471 in 2015-2016.

Student fall enrollment generally increased by 1.26% per year between 2003 and 2023 with brief declines in 2011 and 2020. Figure 1 illustrates the 20-year historical fall student enrollment data provided by Idaho Department of Education.

Figure 1: Student Enrollment in Idaho Public Schools



In addition, the National Center for Education Statistics projects that, between 2020 and 2030, Idaho will have a statewide enrollment increase of less than 5%. 88% of the respondents of the statewide survey indicated that they felt the current school capacity meets the student demand, but only 25% felt confident the school capacity can meet future student demands.

The average age of the main instructional building at schools across the United States is 49 years, with 38% built before 1970. The respondents to the survey indicated that the average age (or latest major renovation) of their school(s) was 37 years, with a few

noting their buildings were 50-100 years old. While the relative age may be less than the national average, 50% of the respondents indicated the overall condition of their school facilities was fair to poor.

In a 2022 Evaluation report of Idaho K-12 Public School Buildings, more than half of the 115 school districts surveyed rated their building conditions as fair to poor. The study analyzed district results in terms of square feet to account for differences in district size and found that 63% of the total square feet of school buildings was rated as fair to poor.

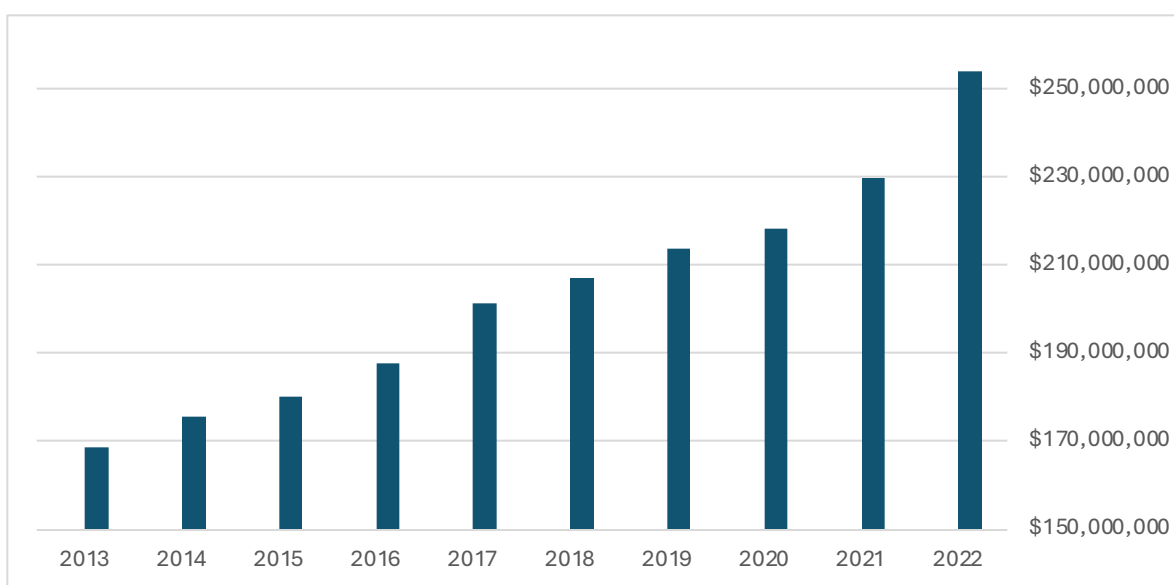
OPERATION AND MAINTENANCE

Effective operation and maintenance programs are critical to the longevity of school facilities. In the 2022 Evaluation report of K-12 Public School Buildings, 75% of the surveyed school districts conducted their own facility condition assessments but only 33 of 155 school districts had submitted a 10-year maintenance plan or 5-year revision to the state between 2016 and 2020.

Idaho ranks last in school building spending when compared to other states. In Idaho, approximately \$760

per student was spent on maintenance and operation (2021-2022) while the national average was closer to \$1300. Operation and maintenance expenditure data pulled from the United States Census Bureau Annual Survey of School System Finances for the state of Idaho is presented in Figure 2. This data shows expenditures increased on average 4% annually from 2013 through 2020, then jumped 10.65% in 2022.

Figure 2: Operation and Maintenance Expenditures in Idaho Schools



A 2022 evaluation report of K-12 Idaho Public School Buildings analyzes the Idaho state allocation for school building maintenance. This report states, “Idaho Code 33-1019 mandates that school districts allocate two percent of school building replacement value toward student-occupied building maintenance every year and the state assists districts in meeting the two percent through the state lottery and state match funds.” This requirement of two percent is low compared to the seven percent recommended by the National Council on School Facilities (NCSF). In addition, the building

replacement value used to determine the two percent allocation was determined in 2008 by Legislature and was set at \$81.45 per gross square foot and the report states that this value has not changed.

96% of the respondents to the survey prepared as part of this report felt the current funding levels did not meet the needs of their schools. Only 8% felt the current budgets were adequate for facility maintenance, operations costs, and planned renovations required for increasing capacity and meeting facility standards.

FUNDING AND FUTURE NEED

Across the United States, an estimated 55% of school districts use local revenues as their primary source of funding for school facilities, compared to 36% that use state funds. Idaho is one of the states that provides no state funding for support for K-12 construction. Idaho has two programs to assist districts with capital expenses, the Bond Levy Equalization Support Program and the Public School Facilities Cooperative Funding Program. Unlike some neighboring states, Idaho does not have a grant program to assist districts with capital costs.

The 2022 evaluation report shows that only 49 of the

115 school districts currently could meet the NCSF recommended allocation percentage of 7% and 66 districts that fall short would need to allocate an additional \$22 million to meet the requirement. In spring of 2024, Governor Little signed into law a new bill that will invest \$1.5 billion in new funding and redirect \$500 million over 10 years to help with Idaho school facility improvements. Less than 5% of the surveyed districts indicated that the current level of funding meets the needs of their schools and none of the surveyed districts felt the future funding prospects will meet the future needs of their schools.

PUBLIC SAFETY, RESILIENCE & INNOVATION

School facilities are critical for public health, safety, and the welfare of all Idahoans. More than 75% of the surveyed respondents indicated that there are existing occurrences where the current condition of their schools' infrastructure may jeopardize the student's safety. In 2024, the Idaho Statesman published an article that identified concerns brought forth by superintendents across the state. Problems affecting student safety included but were not limited to: structural issues, asbestos, overcrowding, accessibility, and emergency preparedness.

Schools should be safe, and in many cases they act as emergency shelters in times of need. When necessary, the public relies on these schools and expect them to be resilient and be ready for the next emergency. Deferred

maintenance or needed safety improvements may not only impact the students currently attending the schools in Idaho, but it will also make these shelters less reliable in an emergency.

Innovation can be key to maintaining public safety and resilience. One innovative solution an Idaho district has used is hiring employees who work in-house as the district's maintenance and construction team. This same district had a building condition evaluation and building capacity study completed and hired an outside architect agency to perform a facility audit on all buildings within the district. Another school district is implementing a 3,5, and 10 year maintenance plan.



Photo: marcantabrico



RECOMMENDATIONS TO RAISE THE GRADE

- Perform and publish regular updates of the Statewide Facilities Needs Assessment, preferably on a 5-year recurring cycle, to better understand current conditions and needs of schools.
- Establish an oversight agency to monitor conditions of school facilities and assist districts with their long-term maintenance plans.
- Conduct and publish comprehensive construction and maintenance programs that consider student safety.
- Establish a grant program and other state revenue streams for capital improvement projects and new construction or explore alternative financing for public school facilities. This can include lease financing, as well as ownership and use arrangements to facilitate school construction projects.
- Prioritize allocating local funding to schools.

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Transit



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GRADE
COMPARISON

ID: C-
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TRANSIT

EXECUTIVE SUMMARY

Public transit in Idaho connects people to jobs, healthcare, education, and other services—especially in communities with limited transportation options. Most residents live outside major urban centers, where service is limited and travel distances are long. Rural households spend over \$14,000 per year on transportation, above the national average. Idaho’s transit network relies on buses and vans, with no passenger rail since 1997, though interest in restoration is growing. While current service is safe and effective, aging fleets, limited hours, and maintenance backlogs—especially in rural areas—pose ongoing challenges. Transit depends largely on federal funding, with no dedicated state support and restricted local revenue options. With 20% population growth expected by 2040, Idaho must invest in expanded, sustainable transit systems statewide.

CONDITION AND CAPACITY

Idaho’s public transportation network includes around 80 providers across 42 of 44 counties, serving diverse urban and rural needs. Providers range from large regional authorities to senior centers and nonprofits, offering fixed-route buses, demand-response service, and vanpools that link residents to jobs, medical care, education, and other services.

Table 1 summarizes basic system characteristics for Idaho’s transit providers, including mode of service, annual unlinked passenger trips, fleet size and whether the agency has a current Transit Plan (a guiding document that identifies service goals, funding strategies and capital needs).

Table 1. Idaho Transit Agencies

Transit Agency	Mode	Transit Plan?	2023 Unlinked Passenger Trips	Fleet Size
Ada County Highway District Commuteride	VP	No	130,715	96
Boise State University	MB	Yes	151,658	12
Citylink Transit (Coeur d' Alene Tribe)	MB	Yes	178,423	20
	DR		5,590	
Kootenai County City Link North	DR	Yes	13,676	13
Lewiston Transit System	DR	Yes	6,529	9
	MB		37,704	
Nez Perce Tribe	DR	Yes	12	9
	MB		7,975	
Pocatello Regional Transit	DR	Yes	66,856	40
	MB		122,320	
Shoshone-Bannock Tribes	MB	Yes	24,895	7
Treasure Valley Transit	DR	Yes	34,269	26
	MB		67,623	
Valley Regional Transit	MB	Yes	989,216	101
	DR		100,505	
	DR		6,477	

Source: National Transit Database (2023 Reporting)
VP=Vanpool, DR=Demand Response, MB=Bus

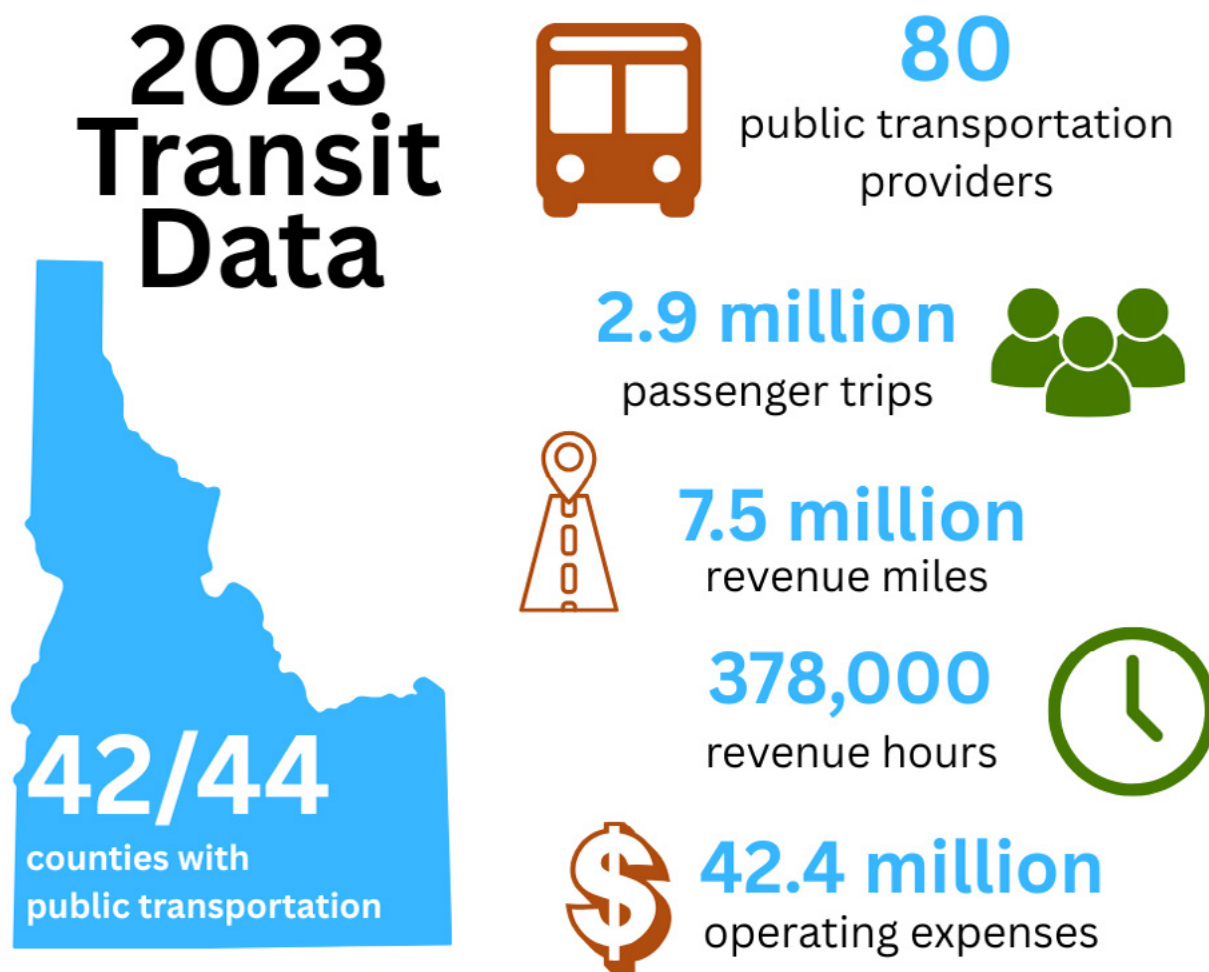
The primary modes of public transportation in Idaho are buses, demand response service, and vanpools. Passenger rail is notably absent, Amtrak's Pioneer route, which connected Idaho to Seattle, Portland, and Chicago, was discontinued in 1997 due to declining ridership and federal budget cuts. Since then, no intercity passenger rail service has operated in Idaho, limiting long distance travel options to highway or air travel.

Though statewide ridership has not returned to pre-pandemic levels, operating expenses and revenues have increased since 2018 due to rising fuel, labor, and maintenance costs and limited economies of scale in rural systems. Providers struggle with aging fleets, deferred maintenance, and expanding capacity amid growing urban and rural demand.

Despite Idaho's fast growing population, which is expected to increase by 20% by 2040, transit systems are limited in reach and frequency. As of 2025, only a few, like Valley Regional Transit in the Treasure Valley, offer frequent all-day service. Many rural agencies operate demand-response or minimal fixed-route service on limited schedules.

limited, particularly for rural areas and smaller transit systems. However, population growth will continue to place additional pressure on existing transit infrastructure. Without expanded service hours, additional vehicles, and dedicated funding for fleet replacement and facility upgrades, many agencies may struggle to maintain current operations, let alone expand.

Data on Idaho's transit assets and facility condition are



OPERATION AND MAINTENANCE

Operation and maintenance (O&M) expenses cover vehicle operation, driver wages, fuel, routine maintenance, and administration, all core costs for reliable service excluding expansion or upgrades.

Table 2 presents several key O&M metrics from the 2023 National Transit Database. These metrics show that

total operating expenses vary greatly between agencies depending on system size and service levels, cost per passenger trip is higher in low-density rural areas, and passenger fare revenues make up only a fraction of total operating expenses. Some smaller or rural systems are entirely fare-free, resulting in a 0% fare revenue share.

Table 2. Transit Agency Operating Expenses

Transit Agencies	Mode	2023 Total Operating Expenses	2023 Cost Per Passenger	Fare Revenues per Total Operating Expense
ACHD Commuteride	VP	\$1,241,488	\$9.50	79%
Boise State University	MB	\$635,858	\$4.19	0%
Citylink Transit (CDA Tribe)	MB	\$2,127,571	\$11.92	0%
	DR	\$289,419	\$51.77	0%
Kootenai County City Link North	DR	\$972,741	\$71.13	0%
Lewiston Transit System	DR	\$481,823	\$73.80	2%
	MB	\$645,060	\$17.11	5%
Nez Perce Tribe	DR	\$32,638	\$2,719.83	2%
	MB	\$1,280,284	\$160.54	1%
Pocatello Regional Transit	DR	\$1,723,283	\$25.78	24%
	MB	\$1,187,300	\$9.71	17%
Shoshone-Bannock Tribes	MB	\$635,090	\$25.51	0%
Treasure Valley Transit	DR	\$1,835,161	\$53.55	29%
	MB	\$1,712,668	\$25.33	0%
Valley Regional Transit	MB	\$14,522,985	\$14.68	5%
	DR	\$6,506,514	\$64.74	1%
	DR	\$212,202	\$32.73	0%

Source: National Transit Database (2023 Reporting) VP=Vanpool, DR=Demand Response, MB=Bus

As shown in Table 2, farebox recovery (the percentage of operating costs covered by passenger fares) varies widely. Urban systems recover more from fares due to higher demand and frequent service, while rural agencies' low ridership and broad coverage make fare recovery challenging.

Operating costs have risen since 2018 due to inflation, higher fuel and labor costs, and aging fleets, while fare revenue as a share of total operating costs has declined partly due to COVID-19 impacts. Many Idaho transit agencies, especially smaller or rural operators, face maintenance backlogs and vehicle replacement needs. According to Valley Regional Transit's Transit

Development Plan, fixed-route buses typically reach the end of their 12–14 year lifespan and must be replaced. Without timely replacement, agencies risk higher repair costs, reduced reliability, and service disruptions.

According to ITD's Idaho Public Transportation Plan, transit ridership is expected to increase by 28% statewide by 2028. To accommodate this growth and improve system resilience, Idaho will need to implement funding reforms that support both ongoing operations and future expansion. Without a more stable and diversified funding structure, many transit providers, especially those serving rural or underserved populations, remain financially vulnerable.

Figure 2. Lewiston Transit in Lewiston, Idaho



Photo Credit: Lewiston Transit

FUNDING AND FUTURE NEED

Idaho's transit funding is a patchwork of federal, local, and fare-generated revenues, with little direct state investment. Federal funds, primarily through the Infrastructure Investment and Jobs Act (IIJA), remain the largest source for both capital and operational budgets. IIJA has increased Idaho's federal transit allocations through 2026, allowing agencies to replace vehicles, upgrade facilities, and improve service. In 2023, Valley Regional Transit and Treasure Valley Transit received

over \$2.8 million and \$1.1 million, respectively, in federal capital support through FTA programs authorized under the IIJA. Tribal agencies such as the Nez Perce Tribe and Shoshone-Bannock Tribes rely almost entirely on federal funds for daily operations.

The breakdown of 2023 transit funding by agency is shown in Table 3.

Table 3. Idaho Transit Agency Funding

Transit Agencies	Expenditure Type	Fares	Local Funding	State Funding	Federal Funding	Total Funding
ACHD Commuteride	Operations	\$982,137	\$240,716	-	\$25,787	\$1,248,640
Boise State University	Operations	\$635,858	-	-	-	\$635,858
Citylink Transit (CDA Tribe)	Capital	-	-	-	\$53,329	\$53,329
	Operations	-	\$268,502	-	\$2,148,488	
Kootenai County City Link North	Capital	-	\$230,931	-	\$1,232,380	\$1,463,311
	Operations	-	\$8,164	-	\$964,577	\$972,741
Lewiston Transit System	Capital	-	\$9,239	-	\$36,954	\$46,193
	Operations	\$114,497	\$175,404	\$83,002*	\$828,680	\$1,126,883
Nez Perce Tribe	Operations	\$7,762	\$126,552	-	\$1,178,608	\$1,312,922
Pocatello Regional Transit	Capital	\$33,560	\$85,868	-	\$752,454	\$871,882
	Operations	\$611,638	\$501,499	-	\$752,454	\$871,882
Shoshone-Bannock Tribes	Operations	-	-	-	\$635,090	\$635,090
Treasure Valley Transit	Capital	\$43,268	-	-	\$1,144,220	\$1,187,488
	Operations	\$564,516	\$389,951	-	\$2,593,362	\$3,547,829
Valley Regional Transit	Capital	-	\$696,309	-	\$2,873,232	\$3,569,541
	Operations	\$2,017,179	\$9,414,704	-	\$9,917,478	\$21,349,361

Source: National Transit Database (2023 Reporting)

*Lewiston Transit System has routes that cover cities in Washington. The state funding comes from Washington

Local funding, including contributions from cities, counties, and partner institutions, helps fill some gaps. Valley Regional Transit receives the largest share locally, totaling over \$9.4 million in 2023. Fare revenues play a relatively small role statewide, rarely covering more than 25% of operating costs. Boise State University and ACHD Commuteride are exceptions, primarily serving specific user groups and generating nearly all operating revenue internally.

Only one agency, Lewiston Transit System, reported state funding in 2023. Their system covers cities across the state line in Washington as well and receives support from

the Washington State Department of Transportation.

While federal support has grown in recent years, Idaho has no dedicated state transit funding source, making it one of the few states without a stable state level contribution for public transportation. This lack of a stable state-level contribution forces agencies to rely heavily on local governments for the required federal match and most operating expenses. Without dedicated revenue tools - such as a statewide sales tax for transit, local option taxes, or direct appropriations - agencies struggle to expand service, invest in long-term capital projects, or fully leverage available federal funds.

With ridership projected to grow 28% by 2028, this funding gap leaves many Idaho transit providers financially vulnerable. Stable, long-term state funding is essential to meet growing demand, offset rising operating costs, and expand access—particularly in fast-growing urban areas and rural or underserved communities.

Meeting Idaho’s future transit needs will require more than just filling existing funding gaps, it will take sustained coordination and investment from all levels of

government. Community outreach occurs statewide, with forums like the Idaho Public Transportation Office within the Idaho Transportation Department (ITD) fostering innovation and connecting providers, the public, and state representatives through summits and advisory groups. As Idaho continues to grow, Idaho’s transit infrastructure should be supported by increased local, state, and federal investment.

PUBLIC SAFETY

Idaho’s public transportation systems have maintained a strong safety record. In 2022, there were nine reported transit-related safety incidents statewide, only two of which resulted in injuries. Notably, Idaho has never recorded a transit-related fatality, reflecting the low-risk nature of its services and effective safety protocols.

Most incidents are minor and localized. For example, Valley Regional Transit, the largest transit agency in the state, reported six non-major security events in 2022. These included verbal or physical altercations not requiring medical attention and small operational

disruptions that did not escalate.

Transit agencies focus on operator and rider safety through employee training, routine maintenance, and adherence to Federal Transit Administration (FTA) safety reporting requirements. Investments in operator training, surveillance systems, and community engagement help ensure transit remains safe and responsive as ridership grows. Continued investment in both human and technological safety resources will be key going forward.

RESILIENCE AND INNOVATION

Idaho faces natural hazards, including wildfires, snowstorms, earthquakes, and landslides, though these have not yet significantly disrupted public transportation systems. However, increasing extreme weather events are prompting agencies to consider future impacts on infrastructure, operations, and service continuity. Future resilience planning is critical to maintaining reliable transit amid environmental and operational stresses.

Idaho transit agencies are working to keep buses and other services running during and after extreme weather and natural disasters. The Idaho Emergency Operations Plan and Idaho Transportation Department’s Emergency Program call for measures such as making bus maintenance and storage facilities more resilient—for example, reinforcing buildings to handle heavy snow or high winds, improving drainage to prevent flooding, using fire-resistant materials, and adding backup power so buses can be fueled or charged during utility outages. In the Treasure Valley, the Community Planning Association of Southwest Idaho (COMPASS)

has assessed transit vulnerabilities to wildfire smoke, extreme heat, and flooding, recommending relocating key facilities out of hazard zones, improving evacuation routes, and building redundancy into operations.

In rural and mountain areas, preparedness focuses on clearing snow and ice at stops and park-and-ride lots, identifying alternate bus routes, and coordinating with emergency managers for evacuations and shelter access.

Valley Regional Transit has paired resilience with innovation through its electric bus program. In August 2022, VRT received a \$17.4 million FTA Low-No Emission (Low-No) Grant to purchase eight electric buses, four depot chargers and fund workforce training. In 2024, the agency received an additional \$16.7 million FTA Bus and Bus Facilities Grant to acquire up to six more electric buses, expand charging infrastructure, and upgrade the Towne Square Mall Transit Center. As of 2025, VRT operates 17 battery electric buses, alongside a compressed natural gas (CNG) fleet, with

eight more electric buses and additional depot chargers scheduled for delivery in 2026, while overhead charging is also under construction. These investments in clean technology enhance fuel price resilience and reduce emissions. Although no other Idaho agencies currently

operate electric buses, VRT's experience may serve as a model as funding and infrastructure become more widely available.

Figure 3. VRT's Electric Bus



Photo Credit: Valley Regional Transit

Innovation is expanding statewide, particularly in urban areas. Most Idaho transit agencies now provide real-time vehicle tracking, mobile ticketing and contactless fare payment through platforms such as Passio GO!, ETA SPOT, Umo Mobility or DoubleMap.

Boise's Downtown Transit Center (Main Street Station), opened in 2016, is Idaho's most comprehensive customer hub - offering underground bus bays, a staffed service desk, restrooms, bike repair, and real-time arrival screens. VRT uses this facility to demonstrate how schedule adjustments, onboard displays and high-quality passenger amenities can improve reliability, accessibility and rider experience.

VRT leads major innovation along the State Street corridor connecting downtown Boise to Eagle in the Treasure Valley. The agency is investing \$10.5 million to upgrade accessible stations, install real-time displays and ticket machines, add in-lane electric bus charging, improve pedestrian crossings, and build a multi-use pathway. This project lays the groundwork for future bus rapid transit (BRT) on one of Idaho's busiest corridors. In addition, transit signal priority (TSP) is being implemented at key intersections to extend green lights or shorten red lights for approaching buses, improving travel time reliability and supporting premium transit service.

Micromobility options, including bike share, e-scooters, and app-based ride services, which help solve “first mile/last mile” challenges, increasing access to fixed-route transit. In Boise, companies like Lime offer shared e-scooters and bikes that connect neighborhoods to

major transit corridors like State Street.

While smaller and rural agencies face more limited capacity to implement new technologies, Boise-area successes offer scalable models for statewide adoption.

Figure 4. E-Scooters



Photo Credit: Kittelson & Associates, Inc.



RECOMMENDATIONS TO RAISE THE GRADE

Public transit is increasingly vital for urban and rural Idaho communities. It supports cleaner air, reduced traffic congestion, better access to jobs and services, and mobility for older adults, youth, and those without cars. Without expanded and sustained investment, Idaho's transit systems risk failing to meet growing demand—particularly in fast-growing regions like the Treasure Valley.

To improve Idaho's transit infrastructure and support the state's economic and population growth, recommended strategies include:

- **Strengthen coordination with the Idaho Transportation Department's Public Transportation Office** and regional providers to support planning, resource sharing, and aligned investments.
- **Expand and sustain service in urban and rural areas**, emphasizing lifeline routes and improving urban route frequency, span, and reliability.
- **Pursue stable, diversified funding** at local, state, and federal levels to reduce dependence on fares and unpredictable federal grants.
- **Support legislation establishing dedicated state transit funding**, which currently does not exist. Even modest consistent investment would improve service quality and planning.
- **Invest in infrastructure** such as premium transit corridors, real-time information systems, and multimodal hubs that increase ridership and operational efficiency.

Transit in Idaho is at a turning point. Strategic investments today will ensure that transit remains viable, responsive, and resilient for future generations. Without increased support, however, many agencies will remain fiscally constrained, limiting the state's ability to address mobility needs and achieve broader economic and environmental goals..



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Wastewater



GRADE
COMPARISON

ID: C+
Nat'l: D+



WASTEWATER

EXECUTIVE SUMMARY

Idaho's wastewater systems face challenges from aging infrastructure, rapid growth, and tightening environmental regulations, with \$2.6 billion in investment needed over the next 20 years. While cities like Boise and Meridian have made major upgrades, many rural communities struggle to fund improvements due to small ratepayer bases. Over one-third of Idahoans rely on septic systems, increasing groundwater contamination risks as development spreads. In 2023, 65 of 112 treatment plants reported Clean Water Act violations, often tied to aging equipment and capacity issues. Many waterways are impaired by nutrient and bacteria pollution, threatening rivers and aquifers that supply 95% of Idaho's drinking water. Expanding climate-resilient and energy-efficient technologies—along with improved oversight and funding—will be key to sustainable wastewater management.

CAPACITY

Idaho's wastewater infrastructure is under increasing pressure due to rapid population growth, nearly 25% since 2010, and expanding urban development. The state's 186 publicly owned treatment works (POTWs) serve the majority of its residents. Many facilities still have available capacity, but localized growth is placing significant strain on systems in high-growth regions such as the Treasure Valley, Kootenai County, and eastern Idaho.

Approximately 86% of POTWs provide secondary treatment and only 12% offering advanced treatment technologies. Nationally, about 37–40% of POTWs use advanced treatment, meaning Idaho's capacity to meet more stringent nutrient and effluent standards is significantly below the national average. This gap limits the ability to address phosphorus and nitrogen reductions in sensitive watersheds while also accommodating future growth.

Figure 1.



In rural areas, over 35% of Idaho's population relies on septic systems, a figure significantly higher than the national average of 20%. While septic systems can be effective in low-density settings, their prevalence raises concerns about groundwater contamination, especially in regions with high water tables or porous soils. As development expands into rural areas, the strain on these systems increases, often necessitating careful planning and potential transitions to centralized treatment solutions.

Oversight of these systems falls under the Idaho DEQ Onsite Wastewater Treatment Rules which set design,

siting and permitting requirements. Local health districts issue permits, conduct inspections for new and repaired systems, and enforce compliance. While inspections are routine for new installations, ongoing inspection requirements for existing systems are generally limited, and enforcement approaches vary by jurisdiction.

Idaho's wastewater infrastructure will need to adapt to these demographic, technological, and regulatory pressures by expanding treatment capacities, increasing adoption of advanced treatment processes, and ensuring both centralized and decentralized systems can effectively manage current and future wastewater volumes.

CONDITION

Many of Idaho's wastewater treatment facilities and collection systems are aging and are in need of significant upgrades. Infrastructure components such as pipes, pumps, and treatment units are approaching or have exceeded their intended service lives, leading to increased

maintenance requirements and potential system failures. Statewide data on the average age of wastewater pipelines is not readily available. Fortunately, no major wastewater line breaks have occurred in recent years.

For instance, the City of Driggs has faced challenges with its wastewater treatment plant, which has struggled to meet ammonia discharge standards due to capacity and design limitations. In response, Driggs is planning a \$25 million major facility upgrade to address these issues and accommodate future growth.

While Idaho-specific figures on regulatory consent orders are not published in one centralized source, a recent Idaho Conservation League study found that more than half of Idaho's wastewater treatment facilities had at least one Clean Water Act violation in 2023, totaling 458 documented exceedances statewide. These violations, often related to effluent limits, have triggered permit modifications, compliance schedules, and in some cases, enforcement actions.

Sanitary Sewer Overflows (SSOs), where untreated or partially treated sewage is released into the environment, are regulated under IPDES rules requiring

electronic reporting and prompt public notification. Idaho's DEQ reports individual SSO events through permit databases, but statewide totals for the number or volume have not been aggregated in public reports.

Infiltration and inflow (I/I) issues are prevalent in several communities, where stormwater and groundwater enter aging sewer systems, overwhelming treatment capacities and leading to potential overflows. These conditions not only strain the existing infrastructure but also pose risks to public health and the environment.

Addressing the condition of Idaho's wastewater infrastructure requires targeted investments in rehabilitation and replacement projects, implementation of asset management programs, and adoption of modern technologies to reduce overflows, prevent violations and improve system reliability and performance under growing environmental and regulatory pressures.

OPERATION & MAINTENANCE

Operating and maintaining Idaho's wastewater systems is a constant challenge that directly affects compliance, service reliability, and asset performance. According to Idaho's DEQ, roughly 75% of the state's municipal wastewater treatment facilities serve fewer than 3,300 people, and many of these small systems lack the staff, resources, or formal asset management programs needed to carry out preventive maintenance. As a result, they often operate reactively, repairing equipment after failures occur, a practice that shortens asset lifespans and increases long-term costs.

Workforce limitations compound the problem. DEQ operator certification data shows that more than 40% of Idaho's certified wastewater operators are within 10 years of retirement eligibility, and rural utilities report difficulty recruiting and retaining licensed Class II and III operators. Without adequate staffing, essential preventive work such as process optimization, equipment lubrication, and proactive pump rebuilds is often deferred.

While larger systems often use computerized maintenance management systems and GIS based mapping to track assets and schedule work, smaller

systems may rely on paper records or institutional knowledge, making it harder to prioritize upgrades. Energy use remains a major operating cost, and while some facilities have reduced costs through high efficiency blowers, process controls, and biosolids handling improvements, these upgrades require funding that smaller communities often cannot secure.

Maintenance of collection systems also varies significantly. Larger communities often follow annual or multi-year cleaning and CCTV inspection cycles, while many smaller systems perform maintenance only in response to blockages or backups. This reactive approach increases vulnerability to infiltration and inflow (I/I) and sanitary sewer overflows (SSOs) during wet weather. Nationally, the U.S. EPA estimates that reactive maintenance can cost two to five times more than preventive maintenance.

As extreme weather events become more frequent, some systems are adding backup power, portable pumps, and emergency protocols to improve operational resilience. However, these resilience measures are still not standard practice statewide, particularly in smaller jurisdictions where funding and staffing remain persistent barriers.

FUNDING

Idaho's wastewater infrastructure is primarily financed at the local level. Cities and towns are responsible for funding capital improvements and covering all operations and maintenance (O&M) costs, which are typically paid for through rate-based systems. This local funding model creates disparities in the quality and reliability of wastewater infrastructure across the state. Wealthier or faster-growing communities are often better positioned to raise rates or float bonds to finance upgrades, while smaller or rural jurisdictions may struggle to maintain basic system operations.

Residential monthly sewer rates in Idaho range from around \$30 in some larger cities—which benefit from economies of scale—to more than \$70 in small rural communities, where the same fixed costs are spread over far fewer ratepayers. The statewide average for a single family household is roughly \$50 per month. Billing structures also vary widely, some communities, like Boise and Coeur d'Alene, use tiered usage-based systems, while others charge flat monthly rates regardless of consumption. Many rates are already structured to fund major capital improvements, while others are being actively adjusted so cities can better meet system needs. These variations directly affect how much revenue utilities can generate for reinvestment,

allowing some systems to more readily fund upgrades, while smaller utilities often face higher per account cost burdens that limit reinvestment capacity.

Sewer rates are rising in many communities to address aging infrastructure and regulatory pressures. For example, the City of Meridian approved a wastewater rate increase in 2023 to help fund its \$7 million biosolids drying project, while Idaho Falls continues to adjust rates to support system expansion and modernization.

Federal assistance remains an important but limited supplement to local resources. Idaho receives annual support through the Clean Water State Revolving Fund (CWSRF) program, which supports low-interest loans to eligible communities. Under the 2021 Infrastructure Investment and Jobs Act (IIJA), Idaho is set to receive more than \$20.8 million in additional federal wastewater funding by Fiscal Year 2026. These funds have already been used to support energy efficiency upgrades and capacity expansions in cities such as Weiser, Rigby, and Nampa. However, many communities—particularly smaller ones—lack the staff capacity or financial match to access CWSRF funds, leaving critical projects delayed or scaled back.

FUTURE NEED

Idaho's rapid growth continues to create significant demand for expanded and modernized wastewater infrastructure. As new neighborhoods, commercial developments, and industrial zones are built across the state, especially outside existing city limits, wastewater systems must adapt to serve these areas while continuing to meet the needs of existing customers. Many communities are confronting the dual challenge of extending sewer service into growing developments while also upgrading aging infrastructure that is nearing or beyond its useful life.

The U.S. Environmental Protection Agency's 2021 Clean Watersheds Needs Survey estimates Idaho will require \$2.6 billion in wastewater infrastructure investment over the next 20 years. This reflects not only deferred upgrades but also the growing scope of

environmental regulations, increasing service demands, and rising construction and equipment costs. Without a long-term sustainable funding strategy at the state level, local utilities will continue to rely on incremental rate increases, short-term grant opportunities, and limited bonding capacity to meet growing infrastructure needs.

Planning for future needs is particularly complex in communities where new development is occurring in unincorporated areas not yet served by municipal sewer. In these locations, lack of clear jurisdiction, overlapping planning authorities, and fragmented funding strategies make it difficult to scale infrastructure in step with growth. Meanwhile, small and mid-sized cities face mounting operational challenges as stricter permit requirements and rising flows push existing systems toward their limits.

Emerging technologies and decentralized solutions, such as cluster treatment systems or advanced septic alternatives, may offer interim relief in some areas. However, in many cases, centralized wastewater treatment and collection will remain the most viable long-term solution—especially where groundwater protection and effluent reuse are priorities.

PUBLIC SAFETY

Protecting public health is a central responsibility of Idaho's wastewater systems. Municipal treatment plants are regulated under the Clean Water Act through National Pollutant Discharge Elimination System (NPDES) permits or state-issued IPDES permits, which set limits on pollutants discharged to surface waters.

Recent data shows a troubling number of permit violations, signaling growing stress on some of the state's facilities. The number of Clean Water Act violations has generally declined since 2019, though there was a noticeable spike in 2022. In 2023 alone, 65 of Idaho's 112 municipal wastewater treatment plants recorded a total of 458 violations—slightly lower than the 520 recorded in 2022, suggesting a modest positive trend in compliance. While some were one-time overages, others reflect recurring challenges at specific facilities, particularly in meeting ammonia or nutrient discharge limits.

These violations are more than regulatory footnotes—they pose a real threat to water quality and public health. Idahoans rely heavily on clean water sources: 95% of the state's population draws drinking water from groundwater, making proper treatment and discharge of wastewater a critical line of defense. When treatment plants are undersized, outdated, or overwhelmed by stormwater infiltration, the risk of contaminant release increases—especially near shallow aquifers and rivers used for recreation or irrigation.

In Driggs, for instance, chronic violations over several years prompted enforcement action from the U.S. Environmental Protection Agency and a legal agreement requiring the city to upgrade its wastewater treatment plant by 2029. Similar concerns in other parts of the state suggest the need for more proactive monitoring and faster response to permit violations.

Ultimately, meeting Idaho's future wastewater needs will require not just funding, but coordinated land use planning, scalable system design, and proactive capacity management to ensure infrastructure keeps pace with demand.

Beyond conventional pollutants, PFAS (per- and polyfluoroalkyl substances) are emerging as a significant public safety concern. While Idaho has not yet set specific PFAS effluent limits for wastewater treatment plants, national attention is growing around PFAS contamination in biosolids, the treated sludge often applied to agricultural lands. Because PFAS are persistent and can accumulate in soils, crops, and groundwater, utilities may soon face new monitoring requirements and costly treatment upgrades to ensure biosolids are safe for land application.

Another emerging risk is cybersecurity. As more wastewater systems adopt automated controls, remote monitoring, and internet-connected SCADA systems, the potential for cyberattacks increases. These threats can compromise treatment processes, disrupt operations, and risk public safety. The U.S. EPA has emphasized cybersecurity assessments as part of sanitary surveys, and Idaho utilities will need to invest in upgraded network protections, staff training, and response plans—adding to the financial pressures of system compliance.

While large-scale sewage overflows are not common in Idaho, a few minor incidents have been reported in recent years. In 2024, a damaged sewer main in Rexburg prompted temporary water-use restrictions, and a small wastewater overflow in American Falls released a few thousand gallons into a parking lot and the nearby Snake River. Both were quickly located, repaired, and cleaned up, were not necessarily linked to aging infrastructure, and caused no long-term impacts. Idaho has not experienced any major sewer main breaks in the past five years.

However, the state's aging collection systems and I/I issues heighten the risk of future system failures—

especially during spring melt or heavy rainfall events. Many systems are not designed to handle the increasing intensity and variability of precipitation, leaving them vulnerable to backups and bypass events, underscoring the need for proactive maintenance, system upgrades, and resilience planning to protect public health and water quality.

Improving public safety in Idaho's wastewater systems

RESILIENCE AND INNOVATION

As Idaho experiences more intense storms, changing snowmelt patterns, and rapid development in previously undeveloped areas, building resilience into wastewater infrastructure is becoming increasingly important. Many of Idaho's treatment facilities and sewer networks were not designed with modern climate pressures in

mind, and several systems—particularly in older or flood-prone communities—are now being forced to adapt. Spring snowmelt, severe rain events, and aging pipes increase the risk of I/I, placing additional stress on treatment facilities and increasing the chance of overflows or bypasses.

will require a stronger commitment to facility compliance, increased investment in capacity and resilience, and broader adoption of early-warning systems, remote monitoring and robust cybersecurity protections. In addition, Idaho should begin planning for the potential regulatory and operational costs of addressing PFAS in biosolids to protect both public health and the environment.

Figure 2.



In response, several municipalities are beginning to incorporate climate adaptation and sustainability into their long-term wastewater planning. For example, facility, currently under construction, uses a heated greenhouse to reduce the volume of solids going to landfill and repurposes methane gas for onsite heating—making it one of the state’s most energy-conscious wastewater projects. Similarly, the City of Rigby’s recent plant upgrade, completed in 2023, tripled its capacity and introduced enhanced treatment processes capable of meeting stricter ammonia limits, even during cold-weather months when treatment efficiency typically drops.

Water reuse is also gaining momentum as a resilience strategy. While Idaho does not yet have large-scale potable reuse programs, non-potable reuse for irrigation and industrial purposes is being explored or implemented in several regions, particularly in areas where water supply pressures are growing. These projects reduce demand on drinking water systems and improve the efficiency of resource recovery from wastewater.

Many of Idaho’s recent wastewater upgrades have also emphasized technology integration, such as automated monitoring, SCADA systems, and advanced nutrient removal technologies that reduce the risk of permit violations during storm events. However, smaller jurisdictions continue to face barriers in implementing resilient infrastructure due to limited funding and staff resources.

As the state continues to grow, building resilience will depend on scaling innovative technologies to smaller communities, supporting flexible infrastructure design that can adapt to extreme weather, and investing in system redundancy to preserve functionality during emergencies. Idaho’s path forward will require not only modernization, but also a deliberate focus on long-term adaptability, sustainability, and resource conservation.



RECOMMENDATIONS TO RAISE THE GRADE

- **Establish a Sustainable, State-Level Wastewater Infrastructure Fund**

While federal programs like the Clean Water State Revolving Fund help, Idaho relies heavily on local resources. A dedicated state infrastructure fund could help smaller and rural communities access consistent, matchable funding to replace aging infrastructure and comply with regulatory requirements.

- **Support Regional and Small-System Planning Tools**

Many of Idaho's small or unincorporated communities face challenges with growth occurring outside existing sewer service areas. The state should encourage and fund regional wastewater master plans, service area agreements, and decentralized treatment options to avoid long-term system gaps.

- **Scale Resilient and Innovative Technologies Statewide**

Projects in Meridian, Rigby, and Boise have demonstrated the value of biosolids drying, membrane filtration, and energy recovery systems. The state should promote peer-to-peer technical assistance, pilot funding, and cost-sharing for smaller jurisdictions to adopt these solutions.

- **Implement Asset Management Programs Across All Systems**

Many Idaho utilities, particularly small systems, lack formal asset management programs to track equipment condition, schedule preventive maintenance, and plan capital investments. State-supported training, technical assistance, and software tools could help utilities shift from reactive maintenance to proactive lifecycle planning, extending asset life and reducing emergency costs.



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