

Nevada County Economic Index (NCEI)

Methodology, Framework, and Guiding Principles

Powered by the ERC of Nevada County



Economic Resource Council of Nevada County
336 Crown Point Circle, Grass Valley, California 95945
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Introduction

The Nevada County Economic Index (NCEI) was launched in May 2025 through the vision and leadership of Dr. Scott Neeley, President of the Board, and with the support of the Economic Resource Council (ERC) Board of Directors. The NCEI is a quarterly, data-driven tool designed to measure and communicate the health and trajectory of the local economy.

Using data dating back to January 1, 2018, the Index compiles key indicators—such as employment, household income, housing, business activity, consumer behavior, and tourism—into a single, normalized value that can be tracked over time.

Unlike broad national or state-level indices, the NCEI is tailored specifically to Nevada County, offering the localized insight necessary to understand regional economic dynamics. By providing quarterly updates, the Index enables stakeholders to monitor the impacts of policies, market shifts, and local events—highlighting successes and identifying areas in need of intervention.

The NCEI serves as a common reference point to promote cross-sector collaboration and shared understanding, encouraging proactive economic planning and continuous community improvement.

This document provides the methodological foundation for the Nevada County Economic Index (NCEI). It outlines the rationale for index construction, the selection and weighting of indicators, and the principles guiding adjustments for inflation and comparability over time. By detailing the framework, data sources, and justifications underlying the NCEI, this report ensures transparency, consistency, and credibility in the measurement of local economic performance. The objective is to establish a reliable tool for tracking long-term economic trends, informing policy decisions, and supporting strategic planning for Nevada County.

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INDEX INDICATORS AND WEIGHTING

The NCEI uses seven indicators with weighted value and justifications as follows:

Indicator Category	Indicator	Proposed Weight (%)	Justification
Labor Market	Unemployment Rate	20%	Measures workforce engagement and economic health. High unemployment signals economic distress, while low rates suggest stability and opportunity.
Income	Median Household Income	25%	Income reflects individual and household prosperity, and affects spending, saving, and housing decisions.
Housing	Median Home Price	10%	Indicative of housing market demand and affordability. Important, but volatile and can be influenced by non-economic factors like migration patterns.
Business Activity	New Business Licenses/FB N Filings	15%	Acts as a proxy for entrepreneurship and economic dynamism. A rise often signals optimism and growth.
Tourism	Tourism Revenue	10%	Important in counties with a tourism-based economy. For Nevada County, this is significant, but likely not dominant compared to labor or income metrics.
Consumer Activity	Sales Tax Revenue	15%	Captures local spending and consumption habits, tied to both resident and visitor economic activity.
Building Permits	Number of Permits Issued	5%	Building permits are a strong indicator to include in an economic index because they reflect future construction activity, which is closely tied to economic growth.

100%

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METHODOLOGY

Methodology

Data is gathered on a quarterly basis, where possible, in the indicators that are only published annually, then the value for each quarter is the same value as the last published data. Then the data is normalized using a Min-Max standardization technique. The value of a Min-Max method is:

Easy to interpret visually (e.g., 0 = worst, 1 = best)

Well-suited for dashboard displays and scoring models

Retains original proportionality

The formula for Min-Max normalization is:

Normalization = (Raw data) - (Min Value) / (Max Value) - (Min Value)

$$\frac{\text{Raw Data} - \text{Min Value}}{\text{Max Value} - \text{Min Value}} = \text{normalized score}$$

Example Housing: Min Value = \$400,000 Max Value = 700,000 Raw Data = \$500,000

$$\frac{500,000 - 400,000}{700,000 - 400,000} = .33$$

While a Z-Score method has greater value when data has outliers or unknown bounds, the data for the NCEI does not suffer those issues. Additionally the Min-Max method has been adopted over the Z-Score for its ease of presentation.

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DATA SOURCES

Data Sources

Data sources and indicators are selected based on a variety of concerns. The stability of the data into the future must be considered. If the data is likely to not exist, then the indicator and source are not used. Things that might be important but cannot be measured easily such as economic leakage were not used. Other indicators such as Education Levels, Commute time and vacancy rates were not used. The indicators and data sources used in the NCEI are as follows:

Indicator	Source	Frequency
Unemployment (%)	https://fred.stlouisfed.org/series/CANEVA0URN#	Quarterly
Median Income	https://www.census.gov/quickfacts/fact/table/nevadacountycalifornia/POP010210	Annually
Median Home Price	https://www.zillow.com/home-values/1261/nevada-county-ca/	Quarterly
New Fictitious Business Names registration	https://recorder.mynevadacounty.com/AcclaimWeb/search/Disclaimer?st=/AcclaimWeb/search/SearchTypeDocType	Quarterly
Tourism Revenue (TOT)	https://www.nevadacountyca.gov/DocumentCenter/View/55365/Website-TOT-Totals	Quarterly
Sales Tax Revenue	https://www.cdtfa.ca.gov/taxes-and-fees/local-jur-statement.aspx	Quarterly
Building Permits	For County of Nevada and city of Nevada City, https://www.nevadacountyca.gov/1114/Building-Department-For-Truckee - https://www.townoftruckee.gov/217/Building-Reports-Archives - for Grass Valley	Quarterly

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WEIGHTING

Weighting

Weighting indicators in an economic index can enhance accuracy and relevance—but it also introduces potential problems that must be carefully managed.

The NCEI weighting has been reviewed by a large body of stakeholders and is incorporated into this final model.

Periodically reviewed of indicators and weighting should be made, but not frequently changed. The value of the index is the consistence of the data and the value of that data

“Weighting schemes should be defensible, based on expert judgment, stakeholder consultation, or empirical techniques such as factor analysis or principal component analysis.”

Source: *The World Bank participation sourcebook (English)*. Washington, D.C. <http://documents.worldbank.org/curated/en/289471468741587739>

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Consumer Price Index

Consumer Price Index

The Nevada County Economic Index (NCEI) incorporates inflation adjustments by applying the Consumer Price Index (CPI) published by the U.S. Bureau of Labor Statistics (BLS). Specifically, the NCEI utilizes the CPI for All Urban Consumers (CPI-U) for the Sacramento–Roseville Metropolitan Statistical Area (MSA), the nearest available regional proxy, to deflate nominal dollar values. This process converts current and historical monetary figures into real, inflation-adjusted values expressed in constant dollars. By standardizing values through CPI-based deflation, the NCEI controls for changes in the general price level and isolates underlying economic trends. This methodological adjustment ensures that temporal comparisons across indicators—such as income, wages, expenditures, and revenues—reflect changes in real economic activity rather than nominal price fluctuations.

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