

Language Communities of the Bay Area

People, Places and Access

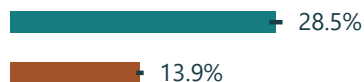
A companion to Languages of the Bay Area

Microdata evidence edition · 24 October 2026

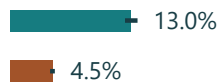
Within non-English home-language communities

Observed rates by reported English proficiency, with 95% intervals

Income below 200% of poverty



Uninsured (ages 18-64)



Rent at least 30% of income



■ English less than very well ■ English very well

ACS 2020-2024 PUMS; adults in housing units. Outcome-specific populations.

Understanding shared circumstances. Recognizing language as a community resource.

Prepared for public learning, community listening and practical program development.

What the evidence now shows

Language is a community resource: a way to share knowledge, build relationships and take part. This report examines how reported English proficiency and home-language use coincide with income, insurance, housing and access. It treats those circumstances as questions for institutions and communities to address together.

Among Bay Area adults using a non-English language at home, the share with income below 200% of the poverty threshold is 28.5% (95% CI 27.8-29.2) for those reporting English less than very well, compared with 13.9% (95% CI 13.5-14.3) for those reporting English very well. The difference is 14.6 percentage points (95% CI 13.9-15.3).

Among the corresponding adults ages 18-64, the uninsured-rate difference is 8.4 percentage points (95% CI 7.8-9.1). After standardizing age composition, it is 9.9 percentage points (95% CI 9.1-10.6). Age composition alone does not explain this difference.

Among adults in cash-rent housing with a computable rent-to-income ratio, the rent-burden difference is 14.8 percentage points (95% CI 13.4-16.3). These are person-level comparisons, rather than associations between county averages.

The results support investigating multilingual service access and employment pathways that recognize community-language skills. They do not identify the cause of the disparities, count unmet service requests, or establish that a particular intervention will work.

All findings in this edition refer to ACS 2020-2024. Estimates describe the five-year survey period, not a current 2026 headcount. This research edition has not undergone independent academic peer review.

Sources: P1, P2, P3. See the reference list and the explorer indicator definitions.

Three levels of evidence

The original Languages of the Bay Area report describes language use. The geographic explorer adds published county and city indicators. This second report adds weighted person records, allowing language, English proficiency and circumstances to be observed together on the same record.

A map can show where languages are used and where poverty is more common. It cannot establish that the same people experience both. Microdata can estimate that overlap and compare rates within a language group. Age standardization can then show whether different age composition accounts for a particular gap.

Neither a direct comparison nor an age-standardized comparison identifies a causal effect. The survey is cross-sectional. Education, migration history, household composition, occupation, disability and institutional practices may affect both the observed groups and their circumstances.

Home language is not necessarily a person’s primary, first, strongest or preferred service language. ACS records a non-English home language and reported English proficiency; it does not inventory everyone’s second-language abilities or determine the language required for a job. English-only at home does not mean someone knows no other language.

Evidence level	What it can support
Published area tables and maps	Where people and conditions are concentrated. City indicators remain geographic context.
Weighted person-level comparisons	How often circumstances coincide within the same people; group differences with sampling uncertainty.
Age-standardized rates	Comparisons under a common age composition, with other differences still present.
Service records and evaluated programs	Whether a specific access approach reaches people and improves service completion. Not measured by this edition.

Sources: P1, P2. See the reference list and the explorer indicator definitions.

Income and English proficiency

Income below twice the official poverty threshold is used here as a broad indicator of economic constraint. It is not a Bay Area living-wage standard, HUD area median income, personal earnings or a grant eligibility determination. Poverty status reflects Census family or individual definitions.

The pooled comparison combines different home-language communities. Comparisons within Spanish, Chinese, Tagalog/Filipino and Vietnamese also show higher low-income rates among adults reporting English less than very well. These four language comparisons were selected before examining these microdata results.

The differences warrant attention to how people obtain information, work, benefits and assistance. They do not show that learning English alone would remove economic disadvantage. These income comparisons are not adjusted for age or other characteristics.

Home language	English less than very well	English very well
Any non-English language	28.5% (95% CI 27.8-29.2)	13.9% (95% CI 13.5-14.3)
Spanish	33.6% (95% CI 32.5-34.8)	21.1% (95% CI 20.3-21.9)
Chinese group	27.3% (95% CI 26.0-28.6)	10.3% (95% CI 9.6-11.0)
Tagalog / Filipino	15.2% (95% CI 13.5-16.9)	10.2% (95% CI 9.1-11.3)
Vietnamese	30.3% (95% CI 28.1-32.5)	16.8% (95% CI 14.8-18.8)

Adults 18+ in housing units with a determined poverty status. Percent below 200% of poverty; individual 95% confidence intervals. Chinese combines the listed Mandarin, Cantonese, Min Nan and Chinese codes; it does not represent a uniform community.

Sources: P1, P2, P3. See the reference list and the explorer indicator definitions.

Insurance and the role of age

Among adults ages 18-64 who use a non-English language at home, 13.0% (95% CI 12.3-13.6) of the English-less-than-very-well group lack health insurance. The corresponding estimate is 4.5% (95% CI 4.3-4.8) for the English-very-well group.

Insurance coverage varies with age. To compare like age compositions, both groups are reweighted to the same Bay Area distribution across ages 18-34, 35-49 and 50-64. The common standard includes all outcome-eligible adults, including English-only home-language users.

The gap remains after this adjustment and becomes larger. This rules out different age composition as a sufficient explanation within this particular standardization. It does not rule out other explanations, and does not measure eligibility, service quality, health conditions or reasons for lacking coverage.

Rate	English less than very well	English very well
Observed uninsured rate	13.0% (95% CI 12.3-13.6)	4.5% (95% CI 4.3-4.8)
Age-standardized uninsured rate	14.1% (95% CI 13.4-14.9)	4.3% (95% CI 4.0-4.5)

Age-standardized percentages describe a common age mix, not actual population counts. Pointwise 95% confidence intervals. The difference uses paired replicate weights, not a test of whether the two individual intervals overlap.

Sources: P1, P2, P3. See the reference list and the explorer indicator definitions.

Housing costs within language communities

For adult non-English home-language users in cash-rent housing, the share living with gross rent at least 30% of household income is 53.7% (95% CI 52.4-55.1) among the English-less-than-very-well group and 38.9% (95% CI 38.0-39.9) among the English-very-well group.

The housing record is linked to each person by the Census household identifier. Person weights answer how many adults live with these housing circumstances. They do not answer how many households are burdened. Several adults may share the same rent and income ratio; replicate-weight estimation retains the survey design information.

Cash-rent units with no computable ratio are excluded. Rent-free occupants, owners, children and people in group quarters are outside this comparison. These choices mean it should not be substituted for a published all-household rent-burden estimate.

Multilingual housing assistance could be relevant to this disparity. This analysis does not measure landlord practices, housing discrimination, individual eligibility or whether existing services are accessible. Those questions require additional evidence.

Housing circumstance	English less than very well	English very well
Gross rent at least 30% of income	53.7% (95% CI 52.4-55.1)	38.9% (95% CI 38.0-39.9)
Gross rent at least 50% of income	26.9% (95% CI 25.9-27.9)	16.7% (95% CI 16.0-17.4)

Observed person-weighted rates for eligible adults. The severe-burden comparison is descriptive and exploratory; it is not part of the eight-comparison inferential family.

Sources: P1, P2, P3. See the reference list and the explorer indicator definitions.

When circumstances overlap

An estimated 319,900 (95% CI 310,700-329,100) Bay Area adults both report English less than very well and have income below 200% of the poverty threshold. This is a direct joint estimate from the same person records, not a multiplication of two county percentages.

Within ages 18-64, an estimated 47,900 (95% CI 44,000-51,800) adults combine those two circumstances with no health insurance, no internet access at home, or both. Each person is counted once in this combined group.

These estimates help frame the scale of overlapping circumstances, not the number who will use a program. Lack of insurance and lack of internet are distinct conditions; combining them is a transparent screening lens, not a validated disadvantage index. It does not measure the quality of connectivity or access to a trusted helper.

Joint circumstance	Bay Area adults	Alameda County adults
English less than very well + income below 200% of poverty (18+)	319,900 (95% CI 310,700-329,100)	76,800 (95% CI 73,100-80,500)
The above + no insurance or no internet (18-64)	47,900 (95% CI 44,000-51,800)	11,900 (95% CI 10,200-13,600)

Estimated people with 95% confidence intervals, rounded to the nearest hundred. Housing-unit population only; valid outcome-specific data required. Alameda County is part of the Bay Area; these are not independent populations.

Sources: P1, P2, P3. See the reference list and the explorer indicator definitions.

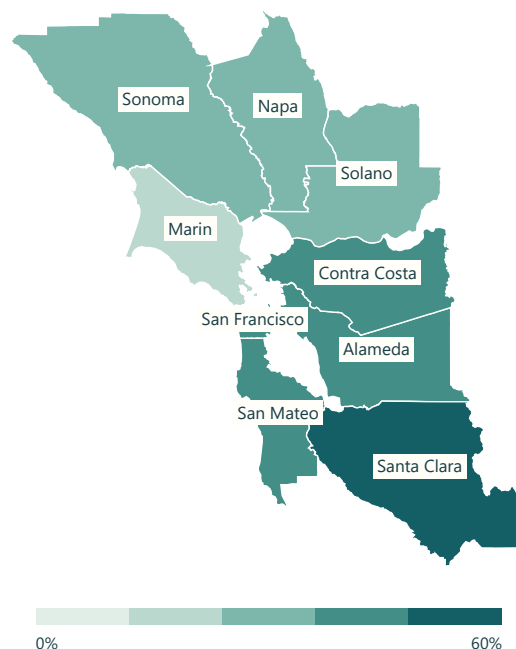
Local context without false precision

The comparison tool maps each selected language and English-proficiency group's outcome rate across nine counties. Both maps use the same outcome, rate type and color scale. Intervals and sample support accompany the county values; gray and hatching identify unsupported and imprecise estimates. The 62 relevant 2020 Public Use Microdata Areas fit within county boundaries, allowing aggregation without fractional county allocation.

San Leandro is not separately identified in these public records. The geographic explorer therefore retains published tables for all 14 Alameda County cities and six unincorporated Census places. A county language-group estimate must not be relabeled as a San Leandro estimate.

The maps remain useful for locating language communities, population patterns, income, housing and modeled health context. Published ACS map estimates use 90% margins of error where supplied; this microdata report uses 95% confidence intervals. CDC modeled health measures are a separate evidence type and cannot be linked to individual PUMS respondents.

County-level microdata weighted population totals differ from the corresponding published ACS totals by at most 0.17% in this validation. This is a useful gross consistency check, not proof that every subgroup estimate is accurate. Public-use sampling and disclosure processing can produce differences.



Context map: residents age 5+ using a language other than English at home, ACS 2020-2024 published tables. Darker shading means a larger share (0-60% scale). This is not a map of language-specific poverty or service failure.

Sources: P1, P3, G1, G2. See the reference list and the explorer indicator definitions.

Make multilingual access a service priority

The observed disparities support prioritizing multilingual access in community organizations and agencies serving residents. The most useful question is whether people can understand, reach and complete a service in a language that works for them. Income and connectivity constraints can make an inaccessible process harder to navigate.

SLP recommends asking people their preferred spoken and written service languages, offering qualified assistance, and providing routes that combine translated information with personal support. Programs should examine intake, appointments, forms, follow-up and appeals, rather than treating translation of a homepage as the full measure of access.

This is a service-design recommendation informed by observed circumstances. The Census estimates do not measure an agency’s language-access provision or prove that a lack of such provision caused the disparities. Population need and institutional performance should be reported separately.

A practical evaluation would record requests by preferred language, availability and wait time for assistance, successful service completion, unresolved requests, and participant-reported understanding. Denominators and repeat contacts matter: a count of interactions is not a count of unique residents. Participation and responses should be voluntary, with reporting aggregated to protect privacy.

Priority	A useful measure
Language choice at intake	Share offered a language choice; preferred spoken and written language.
Human help alongside information	Assistance requested, provided and delayed; completion of the intended service.
Community review	Comprehension and usability reported by residents in their preferred language.
Accountability over time	Comparable completion and waiting-time measures, with missing language data disclosed.

Sources: P1, SF1. See the reference list and the explorer indicator definitions.

Community-language skills as an employment asset

Another implication is to investigate paid roles that make deliberate use of community-language skills. Outreach, peer navigation, listening sessions and community education may offer opportunities to match communication tasks with residents' strengths. These are proposed role types for employer review, not vacancies counted by this study.

San Francisco provides an institutional precedent for recognizing language skills in public service. Its Language Access Ordinance directs departments to use sufficient bilingual staff in public-contact and information positions. Its 2025 summary reports increased language-service activity in fiscal 2023-24 alongside a slight decline in bilingual staffing, and recommends hiring and training. These administrative findings concern San Francisco, not Alameda County.

The precedent has an important boundary: bilingual positions can still require substantial English proficiency. A San Francisco Department of Public Health interpreter-trainee recruitment published in 2022 required English plus Spanish or Cantonese proficiency, a language test and interpreter education or certification. It demonstrates a training pathway, not a policy admitting applicants with limited English to interpretation work.

SLP's proposed extension is to ask employers which tasks could be performed primarily in a community language, with English requirements matched to actual duties and support for necessary English tasks. This could include paid training, bilingual supervision and progression to more advanced roles. Interpretation, translation and other specialized responsibilities require their own demonstrated competencies.

The hypothesis is that such job design could expand opportunity while improving service access. Our data do not yet estimate vacancies, applicants' proficiency in the community language, occupational readiness or the effect of a hiring program. Lower reported English proficiency does not establish either lack of expertise or qualification for a specific position.

Use "community languages" in this context: the non-English language may be a worker's first or strongest language. The ACS English-proficiency categories are not employment language tests. Employer pilots should evaluate both worker outcomes and service quality; they should not assume either benefit in advance.

Sources: SF1, SF2, SF3, P1. See the reference list and the explorer indicator definitions.

What San Francisco’s staffing data add

A separate San Francisco Budget and Legislative Analyst report provides a concrete staffing example. Exhibit 11 lists 1,156 authorized language-special-condition positions in 2022, of which 955 were filled and 201 vacant (17% when rounded). This is evidence of designated positions and recruitment gaps at that time, not an estimate of current Bay Area demand.

The report distinguishes designated bilingual positions from all employees who hold language certification. It also notes that the Human Services Agency’s vacancy rate had improved by March 2025. The evidence should therefore not be summarized as a continuing citywide staffing decline or as proof that retention was the main problem.

These data suggest a useful Alameda County research design: document authorized language-specific roles, the languages and actual duties required, vacancies, pay, training and successful placements. Add service demand and residents’ preferred languages. That would help distinguish a shortage of funded positions, a recruitment problem and a mismatch between job requirements and community skills.

A multilingual pathway pilot could then assess whether appropriately designed roles expand employment and improve service completion. That proposition goes beyond the current Census and San Francisco descriptive evidence; it should be tested, with job quality and advancement considered alongside placements.

Exhibit 11: year	Authorized	Filled	Vacant
2018	1,115	999	116
2019	1,134	967	167
2020	1,130	985	145
2021	1,135	1,002	133
2022	1,156	955	201

Historical administrative series transcribed from Exhibit 11, not a probability-sample estimate. The report uses different year labels and some inconsistent totals across exhibits; the series here retains Exhibit 11 exactly. Its certification totals and other exhibits have not been reconciled. A newer 2025-2026 policy-priorities document was not available for this analysis; this is not a comprehensive current staffing inventory.

Sources: SF4, SF3. See the reference list and the explorer indicator definitions.

The complete planned comparison family

The questions, cohorts, outcomes and eight report contrasts were recorded before the microdata results were examined. This analysis plan was not externally preregistered. All eight comparisons are displayed here, including their effect sizes and uncertainty.

Every contrast subtracts the rate for English very well from the rate for English less than very well among the specified non-English home-language users in the Bay Area. The Holm correction addresses testing this fixed family of eight hypotheses at a 5% familywise error level; it does not cover all choices a visitor may try in the explorer.

All eight differences pass that adjustment. The confidence intervals in the table remain individual 95% intervals, not simultaneous or multiplicity-adjusted intervals. A small p-value does not establish causality, practical importance or program effectiveness. The magnitude and applicable population matter.

Comparison	Gap (points)	Individual 95% CI	Holm-adjusted p
All non-English: low income	14.6	13.9 to 15.3	<0.001
All non-English: uninsured	8.4	7.8 to 9.1	<0.001
All non-English: uninsured (age-standardized)	9.9	9.1 to 10.6	<0.001
All non-English: rent burden	14.8	13.4 to 16.3	<0.001
Spanish: low income	12.5	11.3 to 13.7	<0.001
Chinese group: low income	17.0	15.5 to 18.4	<0.001
Tagalog / Filipino: low income	5.0	3.3 to 6.7	<0.001
Vietnamese: low income	13.5	11.3 to 15.7	<0.001

Two-sided normal-approximation tests based on successive-difference replicate standard errors. Extremely small numerical probabilities are reported as <0.001, never as a probability of exactly zero. Source: microdata_protocol.json and planned_comparisons in the evidence database.

Sources: P1, P3, M1. See the reference list and the explorer indicator definitions.

Survey design, weights and uncertainty

The source is the ACS 2020-2024 five-year California person and housing PUMS files. The Bay Area sample contains 375,824 person records and 163,645 housing records. Person records link many-to-one to housing records through SERIALNO. The analysis includes 293,470 adults age 18+ living in housing units; institutional and noninstitutional group quarters are excluded.

Every person estimate uses PWGTP, including estimates of adults living with a household condition such as rent burden or internet access. For a rate, sum eligible person weights in the denominator and eligible outcome weights in the numerator, then multiply their ratio by 100. Household weight WGTP is not used for these person-based rates.

Repeat the complete calculation with each of PWGTP1 through PWGTP80. The standard error is the square root of $(4/80)$ times the sum of squared differences between each replicate estimate and the full estimate. The 95% interval uses 1.959964 standard errors. Displayed rate intervals are bounded at 0 and 100; count intervals at zero. Negative replicate weights are retained as instructed by Census.

For comparisons, subtract the two rates inside each replicate before estimating the difference's standard error. This accounts for covariance, including shared respondents when comparing a county with the Bay Area. Differences are not inferred by checking overlap of two separately calculated confidence intervals.

Direct age standardization uses ages 18-34, 35-49, 50-64 and 65+, omitting the last band for the uninsured outcome. Each group's age-specific rates are combined using the Bay Area outcome-eligible population shares. Both rates and the common shares are recomputed in each replicate. Only age is adjusted; no regression adjustment for other characteristics is implemented in this edition.

Computer-assisted calculations are reproducible from captured sources, the protocol and Python scripts. Normal-approximation intervals describe sampling uncertainty; they do not incorporate all nonresponse, reporting, coding or coverage error.

Sources: P1, P2, P3. See the reference list and the explorer indicator definitions.

What is displayed, withheld and combined

SLP displays a rate only when the eligible sample has at least 100 records and at least 10 records both with and without the outcome. Rates whose standard error exceeds 30% of the estimate are labeled imprecise and excluded from differences. A noncontrolled estimate with zero calculated uncertainty is not treated as precise. These are SLP analytic safeguards, not official Census thresholds.

Age-standardized rates require at least 30 eligible records and at least five outcome and non-outcome records in every age band, plus a supported observed estimate. These conservative rules mean many small-language county comparisons are unavailable. Missing results must not be ranked as zero or interpreted as a lack of community need.

The explorer includes English only, 19 selected non-English language groups and a residual other-language group, plus all-language and any-non-English aggregates. Chinese, Tagalog/Filipino, Persian/Farsi/Dari and French/Cajun combine specified codes. The full mapping is in the protocol and sources page; the residual group must not be treated as culturally uniform.

Outcome eligibility differs. Uninsured and joint multiple-circumstance rates stop at age 64; educational attainment starts at 25; unemployment uses the civilian labor force ages 18-64; rent burden requires cash rent and a computable ratio. Internet access describes the adult's household. These populations cannot be substituted for one another.

The site offers 6,700 cohort-outcome combinations, with 2,224 passing the observed-rate precision rules, 337 labeled imprecise and 4,139 withheld for sample support. These are interface combinations, not independent tests; some selections describe the same people. Only supported estimates should enter a displayed difference.

Sources: P1, P2, P3. See the reference list and the explorer indicator definitions.

Strengthening the evidence further

The next analytical step is to assess sensitivity to additional composition differences, with a written model specification before results are inspected. Candidate variables include education, nativity, time in the United States and household structure. Adjusted associations must still be presented alongside observed conditions and must not be described as causal effects.

Trends should compare compatible, preferably nonoverlapping periods. A 2015-2019 versus 2020-2024 design is a candidate after reviewing language-code changes, PUMA boundaries, variable definitions and pandemic-era survey effects. Adjacent five-year releases share most years and should not be treated as independent annual observations. No trend finding is established here.

Specialized sources can answer questions the ACS does not. California Health Interview Survey data may illuminate reported health-care experiences, subject to sample, geography and access restrictions. Its public-use files do not identify counties or cities; local estimates require a suitable published product or approved access. HUD CHAS can add housing detail but is derived from ACS, not an independent replication.

For the workforce question, build a dated inventory of job classifications, vacancies, language requirements, pay and training pathways. Separate required and preferred skills, language tests and ordinary job duties. Combine this with agency language-service records and interviews with employers and job seekers. A vacancy is not evidence of accessible hiring or a successful placement.

For SLP's community work, pair structured questions about preferred languages and service experiences with open listening. Define recruitment, consent, compensation and the limits of representativeness before collecting responses. A well-described listening sample can explain mechanisms and priorities without claiming to estimate population prevalence.

Sources: P1, T1, H1, H2, SF2. See the reference list and the explorer indicator definitions.

How to inspect and reuse the evidence

The reader and reading-order PDF are public and printable without a key. Prepared CSV and SQLite exports require a download key. The figures displayed in the interactive explorer are public aggregates and can be inspected in a browser; the key controls prepared downloads rather than access to the displayed statistics.

The CSV retains each outcome's population, period, weight, estimate, confidence interval, eligible sample size and quality flag. The database retains full aggregate replicate estimates, code mappings, sources and the planned comparison family. The public tools and prepared data downloads contain aggregate estimates, not individual person or household records.

Readers can trace estimates through the outcome definitions, analysis plan, source registry and validation results. Census provides the original public-use files and documentation. Recorded retrieval URLs and file hashes help establish which source versions underlie this edition.

Independent record-level checks reproduce selected weighted ratios, all 80 replicate estimates and direct age standardization. Further checks cover covariance in overlapping comparisons, language partitions, county sums, suppression rules, the fixed test family and database integrity. These checks improve reproducibility; they are not a substitute for external methodological review.

This edition adds within-community comparisons to the geographic context maps. The original Languages of the Bay Area report uses a different population and purpose; its home-language estimates should not be substituted for the adult outcome measures here.

Sources: P1, P3. See the reference list and the explorer indicator definitions.

Sources and further inspection

All sources accessed or verified by 24 October 2026. The references identify original public providers; source documentation, retrieval details and file hashes support checking the evidence.

P1 · U.S. Census Bureau: ACS 2020-2024 PUMS User Guide

https://www2.census.gov/programs-surveys/acs/tech_docs/pums/2020_2024ACS_PUMS_User_Guide.pdf

Person and housing files, weights, linkage, public-use geography and replicate estimation.

P2 · U.S. Census Bureau: 2024 PUMS documentation and data dictionary

<https://www.census.gov/programs-surveys/acs/microdata/documentation.2024.html>

Definitions of LANX, LANP, ENG, POVPIP, HICOV, TYPEHUGQ, TEN, GRPIP, ACCESSINET, ESR and SCHL. Consult the dictionary for coding and population definitions.

P3 · U.S. Census Bureau: 2020-2024 PUMS Accuracy

https://www2.census.gov/programs-surveys/acs/tech_docs/pums/accuracy/2020_2024AccuracyPUMS.pdf

Sampling and nonsampling error; replicate variance; negative replicate weights and handling zero uncertainty.

G1 · U.S. Census Bureau: ACS data tables

<https://data.census.gov/>

Published county and place estimates, identified by table, formula and source URL in the geographic indicator dictionary.

G2 · U.S. Census Bureau: Cartographic boundary files

<https://www.census.gov/geographies/mapping-files/time-series/geo/cartographic-boundary.html>

2024 county and place boundaries used for geographic context, not individual locations.

SF1 · San Francisco Administrative Code, Section 91.4

https://codelibrary.amlegal.com/codes/san_francisco/latest/sf_admin/0-0-0-50785

Use of bilingual employees in public-contact and public-information positions. Policy precedent; not an evaluation of workforce outcomes.

SF2 · San Francisco OCEIA: 2025 Language Access Ordinance Summary, key findings

https://media.api.sf.gov/documents/English_LAO_Summary_Report_Key_Findings_and_Recommendations_2025_wUqpGBa.pdf

Published February 1, 2025; describes departmental reports for July 2023-June 2024. The underlying department-level compliance records were not available for this analysis; findings here use the published summary.

SF3 · San Francisco DPH: Interpreter Trainee, class 9910, 2022 recruitment

<https://careers.sf.gov/role/?id=743999822677729>

Historical posting, not a current vacancy. Specifies bilingual English/Spanish or English/Cantonese, testing and interpreter-training requirements.

T1 · U.S. Census Bureau: Comparing ACS data

<https://www.census.gov/programs-surveys/acs/guidance/comparing-acs-data.html>

Guidance for future trend work; this edition contains no trend estimates.

H1 · UCLA Center for Health Policy Research: CHIS public-use files

<https://healthpolicy.ucla.edu/our-work/public-use-files>

Candidate specialized source. Public-use geography restrictions mean county/city linkage cannot simply be assumed.

H2 · HUD: Comprehensive Housing Affordability Strategy data

<https://www.huduser.gov/portal/datasets/cp.html>

Candidate specialized housing tabulations. Based on ACS; not an independent source of respondent evidence.

M1 · Holm, S. (1979). A Simple Sequentially Rejective Multiple Test Procedure

<https://www.jstor.org/stable/4615733>

Scandinavian Journal of Statistics 6(2), 65-70. Reference for the step-down familywise multiple-testing procedure. The bibliographic reference was verified; a full-text copy was not available for this review.

SF4 · San Francisco Budget and Legislative Analyst: Language Access, April 14, 2025

https://sfbos.archive.sfbos.org/sites/default/files/BLA.Language_Access.041425.pdf

Exhibit 11, printed page 22, reports authorized, filled and vacant language-special-condition positions for 2018-2022. Other totals elsewhere differ; use the identified exhibit, not an undocumented combination of counts.