

# Does NYC Local Law 144 apply when HR uses Claude?

Sort each Claude use in HR against the City's three tests, see how an impact ratio is worked out, and see which uses to give Legal first. The full detail behind the guide, with the whole script and all three runs.

Published 2026-10-31 · Online version and downloads: [www.datameaning.com/guides/nyc-local-law-144-and-claude-in-hiring/](http://www.datameaning.com/guides/nyc-local-law-144-and-claude-in-hiring/)

It depends, and Legal decides. New York City's rule asks whether a tool's score, tag, ranking or recommendation is the only factor, weighs most, or overrules other conclusions. Those are three tests. Our script sorts each Claude use in HR against them, marks the ones Legal should look at, and works out impact ratios. It is not a bias audit.

## What the law and the City's rule say

Local Law 144 makes it unlawful for an employer or employment agency to use an automated employment decision tool to screen candidates for employment or employees for promotion within the city unless the tool has had a bias audit no more than one year before use, a summary of the latest audit is public, and candidates and employees have had notice (Administrative Code § 20-870 and § 20-871, [NYC Council: Local Law 144 of 2021](#) (read 2026-10-31), Legistar file ID 4344524). The City's Department of Consumer and Worker Protection (DCWP) adopted a rule that says what "substantially assist or replace discretionary decision making" means. Its section 5-300 gives three tests ([DCWP: adopted rule text](#) (read 2026-10-31)):

The three tests in 6 RCNY 5-300, and the register answer the script maps to each

| Test | What the rule says                                                                                                    | Register answer (output_use) |
|------|-----------------------------------------------------------------------------------------------------------------------|------------------------------|
| i    | "to rely solely on a simplified output (score, tag, classification, ranking, etc.), with no other factors considered" | decides alone                |

| Test | What the rule says                                                                                                                        | Register answer (output_use) |
|------|-------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| ii   | "to use a simplified output as one of a set of criteria where the simplified output is weighted more than any other criterion in the set" | weighted most                |
| iii  | "to use a simplified output to overrule conclusions derived from other factors including human decision-making"                           | overrules other factors      |

A "simplified output" is a prediction or classification: the rule's examples are a score, a tag or categorization, a recommendation (whether a candidate should be given an interview) and a ranking (arranging candidates by how well their cover letters match the job description). The rule says the term does not refer to the output from analytical tools that translate or transcribe existing text. The rule's definitions of "simplified output" and "impact ratio" and the wording of the three tests are in the same [adopted rule text](#) (read 2026-10-31); the rule page gives its effective date as July 5, 2023 ([NYC Rules: adopted rule](#) (read 2026-10-31)).

Three further points from the City's own pages shape what a script can do. The FAQ says the law applies only to employers and employment agencies that use a tool "in the city"; that means the job's location is a New York City office, at least part time; or the job is fully remote but the location tied to it is a New York City office; or the employment agency using the tool is in New York City (or, if it is outside the city, one of the first two is true). It also says the law does not require any specific action based on the results of a bias audit, and does not require auditors to be approved by DCWP ([DCWP: AEDT frequently asked questions](#) (read 2026-10-31)). So the script applies no pass mark: it prints numbers, and what to do about them is for you and your counsel. DCWP's own page lists what must be public and when notice is due ([DCWP: automated employment decision tools](#) (read 2026-10-31)).

## What this covers, and what it does not

This guide does not tell you whether Local Law 144 applies to any use of Claude at your company. That is a legal question for your lawyers, and the City's rule has more in it than three tests: the tool must also be derived from "machine learning, statistical modeling, data analytics, or artificial intelligence" as the rule defines those words, the use must be an "employment decision" in the city, and the audit must be done by an independent auditor on historical data in the cases the rule describes. The script does not test any of that. It does two things that sit beside it: it sorts your own record of each use against the three tests, so Legal sees which uses to read first, and it works out selection rates and impact ratios by the rule's formulas, so you can see the selection-rate and impact-ratio calculations the rule defines and check your own numbers against the City's worked example.

**This is not a bias audit.** Local Law 144 requires an independent auditor, an audit within one year before use, a published summary, and notice to candidates at least 10 business days before use (Administrative Code § 20-871 in [Local Law 144 of 2021](#) (read 2026-10-31), and sections 5-301, 5-

303 and 5-304 of the [adopted rule text](#) (read 2026-10-31)). The script uses generated records. Data Meaning is not the auditor.

---

## What you will need

- A register of your Claude uses in HR as a CSV with a header row: an id, the use, whether it supports a hiring decision, a promotion decision or neither, how its output enters the decision (one of the answers in the table above, or `weighted equal or less`, not a criterion, no score, tag, recommendation or ranking, translates or transcribes), whether the use is "in the city" as the City's FAQ defines it (any of its three cases counts as yes), and an owner.
- Your selection records as a CSV with a header row: one row for each candidate or employee considered, with an id, sex, race/ethnicity as the EEO-1 categories the rule uses, and whether the person was selected to move forward (1 or 0). These are records about people: keep them under your own access controls. The script runs on your machine and sends nothing to Data Meaning; it does fetch the City's rule PDF.
- Python 3 and the `duckdb` module. The script reads each CSV with DuckDB's `read_csv` using a header row and `all_varchar` ([DuckDB: CSV overview](#) (read 2026-10-31)).

---

## Step 1. Pin the City's text, and set the answers you can disagree with

The script downloads the adopted rule and prints its size, its `Last-Modified` header and its SHA-256. If the size or the SHA-256 differs from the pin, an input check fails, so you know the City re-published the file and the quoted definitions need reading again. The `Last-Modified` header is shown for you to read; the script does not compare it. If the download fails, the check fails too: a check that could not run is not reported as ok. The mapping from your answers to the three tests is a table at the top of the script. It is ours, and you can disagree with it.

```
OUTPUT_USE_WORDS = {
    "decides alone": "i",
    output, no other factors considered
    "weighted most": "ii",
    weighted more than any other
    "overrules other factors": "iii",
    factors, including a person's decision
    "weighted equal or less": "none",
    another
    "not a criterion": "none",
    decision
    "no score, tag, recommendation or ranking": "none", # no simplified output at all
    "translates or transcribes": "none",
    transcribe existing text
}
```

```
# test i: relies solely on a simplified
# test ii: one of a set of criteria,
# test iii: overrules conclusions from other
# one criterion, weighted no more than
# read for background, no weight in the
# the rule excludes tools that translate or
```

The answers are matched after trimming spaces and ignoring case. Any answer in your files that is in none of the lists is counted and fails an input check; it is never guessed. In the register, it sends the row to Legal unless an earlier answer in the order in Step 2 already sets the row aside (a decision of *neither*, for example).

---

## Step 2. Sort each use by the three tests, as recorded

The sort takes the first status that applies, in this order: a decision answer that is empty or unknown goes to Legal; a use that supports neither hiring nor promotion is set aside; an output-use or in-the-city answer that is empty or unknown goes to Legal; a use recorded as not used in the city is set aside; a use whose output enters the decision by test i, ii or iii goes to Legal with that test; the rest are outside the three tests as recorded. The statuses say what the register records. They do not say what the law requires.

```
CASE WHEN d.meaning IS NULL THEN 'FOR LEGAL TO CHECK'
      WHEN d.meaning = 'neither' THEN 'NOT A HIRING OR PROMOTION USE AS RECORDED'
      WHEN o.meaning IS NULL THEN 'FOR LEGAL TO CHECK'
      WHEN n.meaning IS NULL THEN 'FOR LEGAL TO CHECK'
      WHEN n.meaning = 'no' THEN 'NOT USED IN THE CITY AS RECORDED'
      WHEN o.meaning IN ('i', 'ii', 'iii') THEN 'FOR LEGAL TO CHECK'
      ELSE 'OUTSIDE THE THREE TESTS AS RECORDED' END AS status,
```

---

## Step 3. Work out the selection rate and the impact ratio

The rule defines the selection rate as the number of individuals in a category moving forward divided by the number in the category who applied or were considered. Its example: if 100 Hispanic women apply and 40 are selected for an interview after use of a tool, the selection rate is 40/100 or 40%. The impact ratio is the selection rate for a category divided by the selection rate of the most selected category ([adopted rule text](#) (read 2026-10-31), section 5-300). The function below is the whole calculation. A table with no one selected has no impact ratio, and the script prints n/a rather than dividing by zero.

```
def impact_ratios(rows, wrong=False):
    """6 RCNY 5-300: impact ratio = the selection rate of a category / the selection rate of the
    most selected category.
    rows: (category, applicants, selected). Returns {category: (selection rate, impact ratio or
    None)}.
    wrong=True divides by the LOWEST rate instead, only to show the self-check below catching
    it."""
    rates = {c: s / n for c, n, s in rows if n > 0}
    ref = (min if wrong else max)(rates.values()) if rates else 0
    return {c: (r, r / ref if ref > 0 else None) for c, r in rates.items()}
```

The script makes three tables, as section 5-301(b) asks: by sex, by race/ethnicity, and by sex and race/ethnicity together. People whose sex or race/ethnicity is blank are in an unknown category: the

script leaves them out of the calculation and prints how many, because the rule asks the audit to indicate that number. So are people who declined to self-identify: list such an answer with the meaning None (the defaults list "I do not wish to self-identify"), and the script counts it as unknown, never as a category, and prints how many declined. An answer that is in none of your lists fails an input check. Until you add it to a list, the script leaves that person out of the calculation and counts them with the unknown category, so read the unknown count together with the input checks.

---

## Step 4. Check the formulas against the City's own example

Section 5-301(b) of the rule prints a worked example: 1390 male applicants with 667 selected, and 1181 female applicants with 555 selected, giving selection rates of 48% and 47% and an impact ratio of 0.979 for women; it also gives a race/ethnicity table and a table by sex and race/ethnicity together. The script recomputes the first two tables from the counts and compares each rounded figure with the one the rule prints. It does not recompute the third. If any figure differs, an input check fails.

```
def check_formulas(wrong):
    """Recompute the City's own worked example and compare each figure with the rule's printed
    one."""
    off = []
    for dim, table in RULE_EXAMPLE.items():
        got = impact_ratios([(c, n, s) for c, n, s, _, _ in table], wrong)
        for c, n, s, pct, ratio in table:
            rate, ir = got[c]
            if f"{rate * 100:.0f}" != pct or ir is None or f"{ir:.{len(ratio.split('.')[1])}f}" !=
ratio:
                off.append(f"{dim}: {c}")
    return off
```

---

## Step 5. Show the 2% option beside the full calculation

Section 5-301(d) lets an independent auditor leave out of the impact-ratio calculation a category that represents less than 2% of the data used for the audit. The summary must then give the auditor's justification and the excluded category's number of applicants and rate. The script prints both calculations side by side and leaves the choice to you and your auditor. It takes a category's share of the data as its share of the people with a known category in that table, which is our reading. When a small category has the highest rate, leaving it out moves every other ratio, as the first run shows.

---

## Step 6. Run nine input checks before trusting either list

- **The City's rule is not the pinned file** (trips on: the City re-publishing the rule, or a failed fetch).

- **The City's worked example recomputes to different figures** (trips on: an impact ratio divided by anything but the most selected category's rate; run 3 shows it).
- **Register ids listed more than once, and register rows with no id** (trip on: a duplicated or unnumbered use).
- **Register answers in no list** (trips on: an answer such as `overrides` that is not one of your words).
- **Candidates listed more than once, and rows with no candidate id** (trip on: a duplicated or unnumbered applicant).
- **Selected values that are not in your list** (trips on: a value such as `maybe`; the row is left out and counted).
- **Sex or race/ethnicity answers in no list** (trips on: an answer such as `Hisp.`).

The script also checks that every selection row is in a category, in an unknown category or left out as unreadable, and that the shares of the data add to 100% in each table. Those two guard the script's own arithmetic: no planted fault trips them, so we say so rather than claim a run that does not exist. A word in your list that no row uses is printed as information. A failed input check marks both lists INCOMPLETE.

---

## Run it on your own data

To run it on your own data, change only the settings between the lines marked `CHANGE THESE FOR YOUR OWN DATA`. Set `REGISTER_FILE` and `SELECTIONS_FILE` to the paths of your two CSV files. In `REG_COLS` and `SEL_COLS`, put the name of the column in your files that holds each field. In `DECISION_WORDS`, `OUTPUT_USE_WORDS`, `NYC_WORDS`, `SEX_WORDS`, `RACE_WORDS` and `SELECTED_WORDS`, put the answers your files use, in lower case, each with the meaning the script gives it. An answer that is in none of those lists is counted and fails an input check, so the run tells you which one to add.

We also ran the script on a second set of generated files with other file names, other column names, other answer words, upper-case answers, a blank New York City answer and a fault planted for each of the seven checks that read your files. It read `MOST WEIGHT` as the second test, sent the blank New York City answer to Legal, counted two "prefer not to say" answers as unknown without failing a check, printed the unknown count for sex, and failed the input checks for the repeated id, the row with no id, the answer in no list, the candidate listed twice in another case, the row with no candidate id, the selected value `?` and the ethnicity answer in no list. We have not run it on a real company's records.

[Download nyc\\_1144\\_claude\\_check.py](#)

[Download the full guide \(PDF\)](#)

## The code

The complete download, [nyc\\_ll144\\_claude\\_check.py](#), exactly as the runs below used it.

```
#!/usr/bin/env python3
"""NYC Local Law 144 and Claude in hiring: sort your Claude use cases by the City's three tests,
and work out selection
rates and impact ratios by the City's formulas, in DuckDB.

    python3 nyc_ll144_claude_check.py                # clean generated records
    python3 nyc_ll144_claude_check.py --plant        # generated records with planted
faults
    python3 nyc_ll144_claude_check.py --wrong-denominator # clean records, impact ratio divided
by the wrong rate
    python3 nyc_ll144_claude_check.py --strict        # exit 1 when anything needs follow-up
    python3 nyc_ll144_claude_check.py --work-dir some/folder # where generated files and results
are written

Builds two lists, each printed with its filters, row count and a SHA-256 of its rows:
    use-case sort      every row of your Claude use-case register: is it a hiring or promotion use,
does Claude's output rely
                        alone, weigh most or overrule (the three tests in 6 RCNY 5-300), and is it
used "in the city" as the
                        City's FAQ defines it. A use that may meet a test, or whose answer is empty or
not recognized, is
                        FOR LEGAL TO CHECK. A use is never called an AEDT and never called exempt.
    impact ratios      selection rate and impact ratio for each category, by sex, by race/ethnicity
and by both together, the
                        way 6 RCNY 5-301(b) defines them, with the number of people in an unknown
category, and the 2% option
                        of 5-301(d) shown beside the full calculation
Before it builds them it pins the City's rule (size and SHA-256), checks its own formulas against
the rule's worked example,
and runs input checks; the lists are marked INCOMPLETE if one fails. It prints numbers only: it
does not say a tool passes
or fails, and it applies no threshold, because Local Law 144 sets none.

This is NOT a bias audit. Local Law 144 requires an independent auditor, within one year before
use, a published summary
and notice to candidates. Legal decides whether a use is covered. The generated records are NOT a
real organization's data.
The rule: https://rules.cityofnewyork.us/wp-content/uploads/2023/04/DCWP-NOA-for-Use-of-Automated-
Employment-Decisionmaking-Tools-2.pdf
"""
import csv
import hashlib
import http.client
import pathlib
import random
import sys
import urllib.request

import duckdb

# ---- CHANGE THESE FOR YOUR OWN DATA -----
REGISTER_FILE = None      # your Claude use-case register (CSV with a header row); None = generate
```

```

SELECTIONS_FILE = None    # your selection records, one row per candidate or employee considered
                           (CSV with a header row); None = generate
# the column of YOUR register and YOUR selection file that holds each field
REG_COLS = {"use_case_id": "use_case_id", "use_case": "use_case", "decision": "decision",
            "output_use": "output_use", "nyc": "nyc_affected", "owner": "owner"}
SEL_COLS = {"candidate_id": "candidate_id", "sex": "sex", "race_ethnicity": "race_ethnicity",
            "selected": "selected"}
# YOUR answers (lower case, no spaces at the ends) -> the meaning the script gives them. An answer
in your files that is
# in none of these lists is counted and fails an input check; it is never guessed.
DECISION_WORDS = {"hiring": "hiring", "promotion": "promotion", "neither": "neither"}
# how the use's output enters the decision: i, ii, iii are the three tests of 6 RCNY 5-300; none is
outside them as recorded
OUTPUT_USE_WORDS = {
    "decides alone": "i",                # test i: relies solely on a simplified
output, no other factors considered
    "weighted most": "ii",              # test ii: one of a set of criteria,
weighted more than any other
    "overrules other factors": "iii",    # test iii: overrules conclusions from other
factors, including a person's decision
    "weighted equal or less": "none",    # one criterion, weighted no more than
another
    "not a criterion": "none",          # read for background, no weight in the
decision
    "no score, tag, recommendation or ranking": "none", # no simplified output at all
    "translates or transcribes": "none", # the rule excludes tools that translate or
transcribe existing text
}
# the use is "in the city" (the City's FAQ): the job's location is a New York City office, at least
part time; or the
# job is fully remote but the location tied to it is a New York City office; or the employment
agency using the tool is
# in New York City (or, if it is outside the city, one of the first two is true). Any of the three
is yes.
NYC_WORDS = {"yes": "yes", "no": "no"}
# None as a meaning: the person declined to self-identify; the row goes to the unknown count of 5-
301(b)(5), never to a category
SEX_WORDS = {"male": "Male", "female": "Female", "i do not wish to self-identify": None}
RACE_WORDS = {                # the EEO-1 categories, as the City's rule
lists them
    "hispanic or latino": "Hispanic or Latino",
    "white": "White (Not Hispanic or Latino)",
    "black or african american": "Black or African American (Not Hispanic or Latino)",
    "native hawaiian or pacific islander": "Native Hawaiian or Pacific Islander (Not Hispanic or
Latino)",
    "asian": "Asian (Not Hispanic or Latino)",
    "native american or alaska native": "Native American or Alaska Native (Not Hispanic or
Latino)",
    "two or more races": "Two or More Races (Not Hispanic or Latino)",
    "i do not wish to self-identify": None,
}
SELECTED_WORDS = {"1": 1, "yes": 1, "0": 0, "no": 0} # selected to move forward (1) or not (0)
# -----

MIN_SHARE = 0.02    # 6 RCNY 5-301(d): an independent auditor may exclude a category under 2% of
the data from the impact ratio
RULE = ("6 RCNY 5-300 to 5-304 as adopted (DCWP, effective 2023-07-05)",
        "https://rules.cityofnewyork.us/wp-content/uploads/2023/04/DCWP-NOA-for-Use-of-Automated-

```

```

Employment-Decisionmaking-Tools-2.pdf",
    462675, "4ecc4463b29440f9b876b0b7319faf2d4c4710b8ad28db9cfa8ae15a123ece2c")
# the worked example printed in 6 RCNY 5-301(b): category, applicants, selected, published
selection rate (%), published impact ratio
RULE_EXAMPLE = {
    "sex": [("Male", 1390, 667, "48", "1.00"), ("Female", 1181, 555, "47", "0.979")],
    "race/ethnicity": [("Hispanic or Latino", 408, 204, "50", "0.97"), ("White", 797, 412, "52",
"1.00"),
                        ("Black or African American", 390, 170, "44", "0.84"),
                        ("Native Hawaiian or Pacific Islander", 119, 52, "44", "0.85"), ("Asian",
616, 302, "49", "0.95"),
                        ("Native American or Alaska Native", 41, 18, "44", "0.85"),
                        ("Two or More Races", 213, 96, "45", "0.87")],
}
USER_AGENT = ("nyc_ll144_claude_check.py (https://www.datameaning.com/guides/nyc-local-law-144-and-claude-in-hiring/; "
    "info@datameaning.com)")
TESTS = {"i": "relies solely on a simplified output", "ii": "weights it more than any other
criterion",
    "iii": "uses it to overrule other factors"}

def qcol(name):
    return "'" + name.replace("'", '""') + "'"

def generate(mode, gen_dir):
    """Seeded stand-in for an organization's register and selection records. mode: clean or
    plant."""
    plant = mode == "plant"
    rnd = random.Random(225)
    gen_dir.mkdir(parents=True, exist_ok=True)
    # category weight and base selection rate: invented for the demo, not a measurement of anyone
    races = [("Hispanic or Latino", 0.17, 0.30), ("White", 0.38, 0.33), ("Black or African
American", 0.19, 0.27),
            ("Native Hawaiian or Pacific Islander", 0.03, 0.28), ("Asian", 0.20, 0.31),
            ("Native American or Alaska Native", 0.01, 0.60), ("Two or More Races", 0.02, 0.35)]
    rows = []
    for n in range(1, 2001):
        race = rnd.choices(races, weights=[r[1] for r in races])[0]
        sex = rnd.choices(["Male", "Female"], weights=[0.52, 0.48])[0]
        pick = rnd.random() < race[2] + (0.02 if sex == "Male" else -0.01)
        blank_sex, blank_race = rnd.random() < 0.04, rnd.random() < 0.03
        declined = "I do not wish to self-identify" if n % 2 == 0 else "" # half the blanks are
a stated decline
        rows.append([f"can_{n:04d}", declined if blank_sex else sex, declined if blank_race else
race[0], "1" if pick else "0"])
    if plant:
        rows[9][2] = "Hisp." # planted: a race answer that is in no list
        rows[19][3] = "maybe" # planted: a selected value that is not 0 or 1
        rows.append(list(rows[29])) # planted: a duplicated candidate
        rows.append(["", "Female", "Asian", "0"]) # planted: a row with no candidate id
    with open(gen_dir / "selections.csv", "w", newline="") as f:
        w = csv.writer(f)
        w.writerow(["candidate_id", "sex", "race_ethnicity", "selected"])
        w.writerows(rows)
    reg = [{"UC-101", "Summarize resumes for recruiters", "hiring", "no score, tag, recommendation
or ranking", "yes", "recruiting.lead@example.test"}],

```

```

        ["UC-102", "Rank resumes against a job description", "hiring", "weighted most", "yes",
"recruiting.lead@example.test"],
        ["UC-103", "Draft job postings", "neither", "no score, tag, recommendation or ranking",
"yes", "hr.ops@example.test"],
        ["UC-104", "Translate applications from other languages", "hiring", "translates or
transcribes", "yes", "recruiting.lead@example.test"],
        ["UC-105", "Suggest a promotion shortlist", "promotion", "weighted equal or less",
"yes", "people.ops@example.test"],
        ["UC-106", "Answer staff questions about HR policy", "neither", "not a criterion",
"yes", "hr.ops@example.test"],
        ["UC-107", "Screen applicants for a role open only outside New York City", "hiring",
"decides alone", "no", "recruiting.lead@example.test"]]
    if plant:
        reg += ["UC-108", "Score interview notes", "hiring", "", "yes",
"recruiting.lead@example.test"], # planted: no answer on output use
        [" uc-109 ", "Rate candidates on culture fit", "hiring", " Weighted Most ", "Yes",
"hr.lead@example.test"], # planted: other case and spaces; still read
        ["UC-110", "Pick finalists", "hiring", "overrides", "yes", "hr.lead@example.test"],
# planted: an answer in no list
        ["UC-111", "Choose who is put forward for promotion", "promotion", "decides alone",
"", "people.ops@example.test"], # planted: New York City not recorded
        ["UC-102", "Rank resumes against a job description", "hiring", "weighted most",
"yes", "recruiting.lead@example.test"], # planted: duplicate id
        ["", "Chat helper for recruiters", "", "", "", "hr.ops@example.test"]]
# planted: no id, no answers
    with open(gen_dir / "register.csv", "w", newline="") as f:
        w = csv.writer(f)
        w.writerow(["use_case_id", "use_case", "decision", "output_use", "nyc_affected", "owner"])
        w.writerows(reg)
    return str(gen_dir / "register.csv"), str(gen_dir / "selections.csv")

def fingerprint(rows):
    body = "\n".join("|".join(" " if v is None else str(v) for v in r) for r in rows)
    return hashlib.sha256(body.encode()).hexdigest()

def population(out_dir, name, control, filters, rows, header, complete):
    out_dir.mkdir(parents=True, exist_ok=True)
    with open(out_dir / f"{name}.csv", "w", newline="") as f:
        w = csv.writer(f)
        w.writerow(header)
        w.writerows(rows)
    print(f"\n== {control}: {name}" + (" " if complete else " ** INCOMPLETE: see input checks
**"))
    print(f"filters    : {filters}")
    print(f"rows        : {len(rows)}")
    print(f"sha256      : {fingerprint(rows)}")

def pin_rule():
    """Download the rule once, print its size, Last-Modified and SHA-256, return 1 when it is not
the pinned file."""
    label, url, size, sha = RULE
    try:
        req = urllib.request.Request(url, headers={"User-Agent": USER_AGENT})
        with urllib.request.urlopen(req, timeout=60) as r:
            body, modified = r.read(), r.headers.get("Last-Modified", "not sent")

```

```

except (OSError, http.client.HTTPException) as e:          # a cut-off download is a failed
pin, not a crash
    print(f" {label}: could not be fetched ({e.__class__.__name__}); the pin cannot be
checked")
    return 1
    got = hashlib.sha256(body).hexdigest()
    same = len(body) == size and got == sha
    print(f" {label}: {len(body)} bytes, Last-Modified {modified}, sha256 {got}" + (" if same
else " ** DIFFERENT FROM THE PIN **"))
    return 0 if same else 1

def impact_ratios(rows, wrong=False):
    """6 RCNY 5-300: impact ratio = the selection rate of a category / the selection rate of the
most selected category.
    rows: (category, applicants, selected). Returns {category: (selection rate, impact ratio or
None)}.
    wrong=True divides by the LOWEST rate instead, only to show the self-check below catching
it."""
    rates = {c: s / n for c, n, s in rows if n > 0}
    ref = (min if wrong else max)(rates.values()) if rates else 0
    return {c: (r, r / ref if ref > 0 else None) for c, r in rates.items()}

def check_formulas(wrong):
    """Recompute the City's own worked example and compare each figure with the rule's printed
one."""
    off = []
    for dim, table in RULE_EXAMPLE.items():
        got = impact_ratios([(c, n, s) for c, n, s, _, _ in table], wrong)
        for c, n, s, pct, ratio in table:
            rate, ir = got[c]
            if f"{rate * 100:.0f}" != pct or ir is None or f"{ir:.{len(ratio.split('.')[1])}f}" !=
ratio:
                off.append(f"{dim}: {c}")
    return off

def ratio_text(v):
    return "n/a" if v is None else f"{v:.3f}"

def main():
    strict, wrong = "--strict" in sys.argv, "--wrong-denominator" in sys.argv
    mode = "plant" if "--plant" in sys.argv else "clean"
    base = pathlib.Path(".")
    if "--work-dir" in sys.argv:
        at = sys.argv.index("--work-dir") + 1
        if at >= len(sys.argv) or sys.argv[at].startswith("--"):
            sys.exit("usage: --work-dir needs a folder after it, for example --work-dir
some/folder")
        base = pathlib.Path(sys.argv[at])
    out_dir, gen_dir = base / "evidence-out", base / "generated"
    reg_file, sel_file = REGISTER_FILE, SELECTIONS_FILE
    for name, words in [("DECISION_WORDS", DECISION_WORDS), ("OUTPUT_USE_WORDS", OUTPUT_USE_WORDS),
("NYC_WORDS", NYC_WORDS),
("SEX_WORDS", SEX_WORDS), ("RACE_WORDS", RACE_WORDS), ("SELECTED_WORDS",
SELECTED_WORDS)]:

```

```

        for k in words:
            if k != k.strip().lower():
                sys.exit(f"{name}: the answer {k!r} must be lower case with no spaces at the ends")
    for v in OUTPUT_USE_WORDS.values():
        if v not in ("i", "ii", "iii", "none"):
            sys.exit(f"OUTPUT_USE_WORDS: {v!r} must be i, ii, iii or none")
    for v in DECISION_WORDS.values():
        if v not in ("hiring", "promotion", "neither"):
            sys.exit(f"DECISION_WORDS: {v!r} must be hiring, promotion or neither")
    for v in NYC_WORDS.values():
        if v not in ("yes", "no"):
            sys.exit(f"NYC_WORDS: {v!r} must be yes or no")
    for name, words in [("SEX_WORDS", SEX_WORDS), ("RACE_WORDS", RACE_WORDS)]:
        for v in words.values():
            if v is not None and not (isinstance(v, str) and v.strip()):
                sys.exit(f"{name}: {v!r} must be a category name, or None for a declined answer")
    for v in SELECTED_WORDS.values():
        if type(v) is not int or v not in (0, 1):
            sys.exit(f"SELECTED_WORDS: {v!r} must be 0 or 1")
    if reg_file is None and sel_file is None:
        reg_file, sel_file = generate(mode, gen_dir)
        print(f"input      : GENERATED records (not a real organization), seed 225, mode={mode}")
    elif reg_file is None or sel_file is None:
        sys.exit("set REGISTER_FILE and SELECTIONS_FILE together")
    else:
        print(f"input      : " + reg_file + ", " + sel_file)

    print("\n== The City's rule (pinned: a different size or hash means the City re-published the
file)")
    rule_bad = pin_rule()
    off = check_formulas(wrong)

    con = duckdb.connect()
    # every column your settings name must exist in your files; a wrong name stops the run with the
names it did find
    for label, path, cols in [("register", reg_file, REG_COLS), ("selection file", sel_file,
SEL_COLS)]:
        have = {r[0].lower() for r in con.execute("DESCRIBE SELECT * FROM read_csv(?, header=true,
all_varchar=true)", [path]).fetchall()}
        lost = [c for c in cols.values() if c.lower() not in have]
        if lost:
            sys.exit(f"{label}: no column named {'', '.join(lost)} in {path}; its columns are {'',
'.join(sorted(have))}")
        for table, words in [("decision_map", DECISION_WORDS), ("output_map", OUTPUT_USE_WORDS),
("nyc_map", NYC_WORDS),
("sex_map", SEX_WORDS), ("race_map", RACE_WORDS), ("selected_map",
SELECTED_WORDS)]:
            con.execute(f"CREATE TABLE {table}(word VARCHAR, meaning VARCHAR)")
            con.executemany(f"INSERT INTO {table} VALUES (?, ?)", [(k, None if v is None else str(v))
for k, v in words.items()])
            word = lambda c: f"lower(trim(coalesce({qcol(c)}, '')))"
            con.execute(f"CREATE TABLE register AS SELECT row_number() OVER () AS row_no,
nullif(lower(trim(coalesce({qcol(REG_COLS['use_case_id'])), ''))), '') AS use_case_id,
nullif(trim(coalesce({qcol(REG_COLS['use_case_id'])), '')), '') AS use_case_id_shown,
{word(REG_COLS['decision'])} AS decision_word, {word(REG_COLS['output_use'])} AS
output_word,
{word(REG_COLS['nyc'])} AS nyc_word
FROM read_csv(?, header=true, all_varchar=true)", [reg_file])

```

```

con.execute(f"""CREATE TABLE selections AS SELECT row_number() OVER () AS row_no,
nullif(lower(trim(coalesce({qcol(SEL_COLS['candidate_id'])}, ''))), '') AS candidate_id,
{word(SEL_COLS['sex'])} AS sex_word, {word(SEL_COLS['race_ethnicity'])} AS race_word,
{word(SEL_COLS['selected'])} AS selected_word
FROM read_csv(?, header=true, all_varchar=true)""", [sel_file])
con.execute("""CREATE TABLE s AS SELECT t.row_no, t.candidate_id, t.sex_word, t.race_word,
t.selected_word,
sm.meaning AS sex, rm.meaning AS race, try_cast(lm.meaning AS INTEGER) AS selected,
sm.word IS NOT NULL AS sex_matched, rm.word IS NOT NULL AS race_matched
FROM selections t LEFT JOIN sex_map sm ON sm.word = t.sex_word LEFT JOIN race_map rm ON
rm.word = t.race_word
LEFT JOIN selected_map lm ON lm.word = t.selected_word""")
q = lambda s: con.execute(s).fetchone()[0]
n_uc, n_sel = q("SELECT count(*) FROM register"), q("SELECT count(*) FROM selections")

# ---- input checks: each says which planted fault trips it
unread = lambda col, tbl, w: q(f"SELECT count(*) FROM {tbl} WHERE {col} <> '' AND {col} NOT IN
(SELECT word FROM {w})")
parts = [("sex", q("SELECT count(*) FROM s WHERE NOT sex_matched AND sex_word <> '')),
("race/ethnicity", q("SELECT count(*) FROM s WHERE NOT race_matched AND race_word <>
''))]
checks = [
("City rule that is not the pinned file", rule_bad, "the City re-published the rule, or the
fetch failed"),
("the City's worked example recomputed to different figures" + (": " + ", ".join(off[:3])
if off else ""), len(off),
"an impact ratio divided by anything but the most selected category's rate (run with --
wrong-denominator)",
("register ids listed more than once", q("SELECT count(*) FROM (SELECT use_case_id FROM
register WHERE use_case_id IS NOT NULL GROUP BY 1 HAVING count(*) > 1)", "a duplicated register
row"),
("register rows with no use case id", q("SELECT count(*) FROM register WHERE use_case_id IS
NULL"), "a register row with no id"),
("register answers in no list (decision, output use, New York City)",
unread("decision_word", "register", "decision_map") + unread("output_word", "register",
"output_map") + unread("nyc_word", "register", "nyc_map"),
"an answer such as 'overrides' that is not one of your words"),
("selection candidates listed more than once", q("SELECT count(*) FROM (SELECT candidate_id
FROM s WHERE candidate_id IS NOT NULL GROUP BY 1 HAVING count(*) > 1)", "a duplicated candidate
row"),
("selection rows with no candidate id", q("SELECT count(*) FROM s WHERE candidate_id IS
NULL"), "a row with no candidate id"),
("selected values that are not in SELECTED_WORDS", q("SELECT count(*) FROM s WHERE selected
IS NULL"), "a selected value such as 'maybe'"),
("sex and race/ethnicity answers in no list", sum(n for _, n in parts), "an answer such as
'Hispanic' that is not one of your words"),
]
print(f"\n== Input checks (register rows: {n_uc}; selection rows: {n_sel})")
ok = True
for label, n, fault in checks:
    ok &= n == 0
    print(f"[{'ok' if n == 0 else 'FAIL'}] {label}: {n}" + (" (trips on:
{fault})"))
# a word list entry that matches nothing in your files is reported, never silently ignored
for tbl, col, src, w in [("register", "decision_word", "decision", "decision_map"),
("register", "output_word", "output_use", "output_map"),
("register", "nyc_word", "nyc", "nyc_map"), ("s", "sex_word", "sex",
"sex_map"),

```

```

        ("s", "race_word", "race/ethnicity", "race_map"]]:
    dead = [r[0] for r in con.execute(f"SELECT word FROM {w} WHERE word NOT IN (SELECT {col}
FROM {tbl}) ORDER BY 1").fetchall()]
    if dead:
        print(f"[info] {src} answers in your word list that no row uses: " + "; ".join(dead))

# ---- the use-case sort: the City's three tests, as recorded
con.execute("""CREATE TABLE sorted_uses AS SELECT r.row_no, coalesce(r.use_case_id_shown, '-')
AS use_case_id,
    CASE WHEN d.meaning IS NULL THEN 'FOR LEGAL TO CHECK'
        WHEN d.meaning = 'neither' THEN 'NOT A HIRING OR PROMOTION USE AS RECORDED'
        WHEN o.meaning IS NULL THEN 'FOR LEGAL TO CHECK'
        WHEN n.meaning IS NULL THEN 'FOR LEGAL TO CHECK'
        WHEN n.meaning = 'no' THEN 'NOT USED IN THE CITY AS RECORDED'
        WHEN o.meaning IN ('i', 'ii', 'iii') THEN 'FOR LEGAL TO CHECK'
        ELSE 'OUTSIDE THE THREE TESTS AS RECORDED' END AS status,
    CASE WHEN d.meaning IS NULL THEN 'decision not recorded or not recognized'
        WHEN d.meaning = 'neither' THEN ''
        WHEN o.meaning IS NULL THEN 'output use not recorded or not recognized'
        WHEN n.meaning IS NULL THEN 'in the city not recorded or not recognized'
        WHEN n.meaning = 'no' THEN ''
        WHEN o.meaning IN ('i', 'ii', 'iii') THEN 'may meet test ' || o.meaning
        ELSE '' END AS reason
FROM register r LEFT JOIN decision_map d ON d.word = r.decision_word LEFT JOIN output_map o
ON o.word = r.output_word
LEFT JOIN nyc_map n ON n.word = r.nyc_word""")
r_uc = con.execute("SELECT row_no, use_case_id, status, reason FROM sorted_uses ORDER BY
row_no").fetchall()
population(out_dir, "use_case_sort", "6 RCNY 5-300: the three tests",
    "every register row, none dropped; first applicable status; an empty or unrecognized
answer is FOR LEGAL TO CHECK, never outside",
    r_uc, ["row_no", "use_case_id", "status", "reason"], ok)
for r in r_uc:
    print(" " + " | ".join(str(v) for v in r))
counts = {k: sum(1 for r in r_uc if r[2] == k) for k in sorted({r[2] for r in r_uc})}
print(" " + "; ".join(f"{k}: {v}" for k, v in counts.items()))
print(" This sorts uses by what the register says. It does not say a use is or is not covered:
Legal decides.")

# ---- selection rates and impact ratios, by the rule's formulas
declined = {"sex": "sex_matched AND sex IS NULL", "race": "race_matched AND race IS NULL"}
dims = [("sex", "sex", "sex IS NOT NULL", declined["sex"]),
        ("race/ethnicity", "race", "race IS NOT NULL", declined["race"]),
        ("sex and race/ethnicity", "sex || ' / ' || race", "sex IS NOT NULL AND race IS NOT
NULL",
        f"({declined['sex']}) OR ({declined['race']})")]
result, accounted, exact_shares = [], True, {}
for dim, label_sql, known_sql, declined_sql in dims:
    cats = con.execute(f"""SELECT {label_sql} AS category, count(*), sum(selected) FROM s
WHERE selected IS NOT NULL AND {known_sql} GROUP BY 1 ORDER BY
1""").fetchall()
    unknown = q(f"SELECT count(*) FROM s WHERE selected IS NOT NULL AND NOT ({known_sql})")
    n_declined = q(f"SELECT count(*) FROM s WHERE selected IS NOT NULL AND NOT ({known_sql})
AND ({declined_sql})")
    no_sel = q("SELECT count(*) FROM s WHERE selected IS NULL")
    known_n = sum(c[1] for c in cats)
    exact_shares[dim] = sum(c[1] / known_n for c in cats) if known_n else 0
    accounted &= known_n + unknown + no_sel == n_sel

```

```

full = impact_ratios(cats, wrong)
kept = [c for c in cats if c[1] / known_n >= MIN_SHARE] if known_n else []
less = impact_ratios(kept, wrong)
print(f"\n-- {dim}: applicants in the calculation {known_n}; in an unknown category (left
out, as 5-301(b)(5) asks you to count): {unknown}")
    + f" (of them, declined to self-identify: {n_declined})"
    + (f"; selection value unreadable (left out): {no_sel}" if no_sel else "")
print(" " + f"{'category':<66}{'applicants':>11}{'selected':>9}{'rate':>8}{'share':>8}
{'impact_ratio':>14}{'if <2% left out':>17}")
    for c, n, sel in cats:
        rate, ir = full[c]
        share = n / known_n
        if c in less:
            alt = ratio_text(less[c][1])
        else:
            alt = "excluded"
        print(" " + f"{'c':<66}{n:>11}{int(sel):>9}{rate * 100:>7.1f}%{share * 100:>7.1f}%
{ratio_text(ir):>14}{alt:>17}")
        result.append((dim, c, n, int(sel), f"{rate * 100:.1f}%", f"{share * 100:.1f}%",
ratio_text(ir), alt))
        left = [(c, n, int(sel)) for c, n, sel in cats if c not in less]
        if left:
            print(" under 2% of the data, so an independent auditor may leave them out of the
impact ratio; the summary must still "
                "give their applicants and rate: " + "; ".join(f"{c} {n} applicants, rate
{full[c][0] * 100:.1f}%" for c, n, _ in left))
            sums_ok = all(abs(v - 1) < 1e-9 for v in exact_shares.values()) # exact shares, not the
one-decimal ones printed
            ok &= accounted and sums_ok
            print(f"\n[{'ok' if accounted else 'FAIL'}] every selection row is in a category, in an
unknown category or left out as unreadable, in each of the three tables"
                + ("[" if accounted else " (trips on: a row counted twice or in no bucket)"])
            print(f"[{'ok' if sums_ok else 'FAIL'}] shares of the data add to 100% in each of the three
tables"
                + ("[" if sums_ok else " (trips on: a category dropped from, or counted twice in, a
table)"])
            population(out_dir, "impact_ratios", "6 RCNY 5-301(b): selection rate and impact ratio",
                "every category with at least one applicant; selection rate = selected / applicants;
impact ratio = rate / highest rate in the table; "
                "unknown category left out and counted; no threshold applied",
                result, ["table", "category", "applicants", "selected", "selection_rate",
"share_of_data", "impact_ratio", "impact_ratio_if_under_2pct_left_out"], ok)

follow = sum(1 for r in r_uc if r[2] == "FOR LEGAL TO CHECK")
print("\n== Result")
print(f"input checks : {'all passed' if ok else 'FAILED, the lists above are not complete'}")
print(f"for Legal : {follow} use(s) marked FOR LEGAL TO CHECK")
print("This is not a bias audit and it does not say any tool passes or fails: Local Law 144
sets no threshold. Legal decides coverage.")
return 1 if strict and (not ok or follow) else 0

if __name__ == "__main__":
    sys.exit(main())

```

## The runs

The three runs in full, as the script printed them. The records are generated (seed 225), not a real organization's data.

### Run 1: clean generated records (python3 nyc\_11144\_claude\_check.py)

```
input      : GENERATED records (not a real organization), seed 225, mode=clean

== The City's rule (pinned: a different size or hash means the City re-published the file)
   6 RCNY 5-300 to 5-304 as adopted (DCWP, effective 2023-07-05): 462675 bytes, Last-Modified Thu,
06 Apr 2023 13:36:03 GMT, sha256 4ecc4463b29440f9b876b0b7319faf2d4c4710b8ad28db9cfa8ae15a123ece2c

== Input checks   (register rows: 7; selection rows: 2000)
[ok ] City rule that is not the pinned file: 0
[ok ] the City's worked example recomputed to different figures: 0
[ok ] register ids listed more than once: 0
[ok ] register rows with no use case id: 0
[ok ] register answers in no list (decision, output use, New York City): 0
[ok ] selection candidates listed more than once: 0
[ok ] selection rows with no candidate id: 0
[ok ] selected values that are not in SELECTED_WORDS: 0
[ok ] sex and race/ethnicity answers in no list: 0
[info] output_use answers in your word list that no row uses: overrules other factors

== 6 RCNY 5-300: the three tests: use_case_sort
filters   : every register row, none dropped; first applicable status; an empty or unrecognized
answer is FOR LEGAL TO CHECK, never outside
rows      : 7
sha256    : 8ede27ebdd69332068b3c9d6f267760731c697c273e5866392c7525b1b9c6748
  1 | UC-101 | OUTSIDE THE THREE TESTS AS RECORDED |
  2 | UC-102 | FOR LEGAL TO CHECK | may meet test ii
  3 | UC-103 | NOT A HIRING OR PROMOTION USE AS RECORDED |
  4 | UC-104 | OUTSIDE THE THREE TESTS AS RECORDED |
  5 | UC-105 | OUTSIDE THE THREE TESTS AS RECORDED |
  6 | UC-106 | NOT A HIRING OR PROMOTION USE AS RECORDED |
  7 | UC-107 | NOT USED IN THE CITY AS RECORDED |
  FOR LEGAL TO CHECK: 1; NOT A HIRING OR PROMOTION USE AS RECORDED: 2; NOT USED IN THE CITY AS
RECORDED: 1; OUTSIDE THE THREE TESTS AS RECORDED: 3
  This sorts uses by what the register says. It does not say a use is or is not covered: Legal
decides.

-- sex: applicants in the calculation 1928; in an unknown category (left out, as 5-301(b)(5) asks
you to count): 72 (of them, declined to self-identify: 38)
  category                                     applicants selected    rate
share impact ratio  if <2% left out
  Female                                                    926      265    28.6%
48.0%              0.896              0.896
  Male                                                    1002     320    31.9%
52.0%              1.000              1.000

-- race/ethnicity: applicants in the calculation 1943; in an unknown category (left out, as 5-
301(b)(5) asks you to count): 57 (of them, declined to self-identify: 27)
  category                                     applicants selected    rate
share impact ratio  if <2% left out
```

|                                                              |     |     |       |
|--------------------------------------------------------------|-----|-----|-------|
| Asian (Not Hispanic or Latino)                               | 366 | 110 | 30.1% |
| 18.8%      0.488      0.872                                  |     |     |       |
| Black or African American (Not Hispanic or Latino)           | 368 | 94  | 25.5% |
| 18.9%      0.415      0.741                                  |     |     |       |
| Hispanic or Latino                                           | 333 | 87  | 26.1% |
| 17.1%      0.425      0.758                                  |     |     |       |
| Native American or Alaska Native (Not Hispanic or Latino)    | 26  | 16  | 61.5% |
| 1.3%      1.000      excluded                                |     |     |       |
| Native Hawaiian or Pacific Islander (Not Hispanic or Latino) | 42  | 8   | 19.0% |
| 2.2%      0.310      0.553                                   |     |     |       |
| Two or More Races (Not Hispanic or Latino)                   | 39  | 9   | 23.1% |
| 2.0%      0.375      0.670                                   |     |     |       |
| White (Not Hispanic or Latino)                               | 769 | 265 | 34.5% |
| 39.6%      0.560      1.000                                  |     |     |       |

under 2% of the data, so an independent auditor may leave them out of the impact ratio; the summary must still give their applicants and rate: Native American or Alaska Native (Not Hispanic or Latino) 26 applicants, rate 61.5%

-- sex and race/ethnicity: applicants in the calculation 1873; in an unknown category (left out, as 5-301(b)(5) asks you to count): 127 (of them, declined to self-identify: 64)

| category                                                              | applicants | selected | rate  |
|-----------------------------------------------------------------------|------------|----------|-------|
| share impact ratio if <2% left out                                    |            |          |       |
| Female / Asian (Not Hispanic or Latino)                               | 183        | 59       | 32.2% |
| 9.8%      0.528      0.868                                            |            |          |       |
| Female / Black or African American (Not Hispanic or Latino)           | 161        | 42       | 26.1% |
| 8.6%      0.427      0.702                                            |            |          |       |
| Female / Hispanic or Latino                                           | 156        | 35       | 22.4% |
| 8.3%      0.367      0.604                                            |            |          |       |
| Female / Native American or Alaska Native (Not Hispanic or Latino)    | 7          | 4        | 57.1% |
| 0.4%      0.935      excluded                                         |            |          |       |
| Female / Native Hawaiian or Pacific Islander (Not Hispanic or Latino) | 21         | 7        | 33.3% |
| 1.1%      0.545      excluded                                         |            |          |       |
| Female / Two or More Races (Not Hispanic or Latino)                   | 18         | 3        | 16.7% |
| 1.0%      0.273      excluded                                         |            |          |       |
| Female / White (Not Hispanic or Latino)                               | 351        | 105      | 29.9% |
| 18.7%      0.490      0.805                                           |            |          |       |
| Male / Asian (Not Hispanic or Latino)                                 | 172        | 50       | 29.1% |
| 9.2%      0.476      0.782                                            |            |          |       |
| Male / Black or African American (Not Hispanic or Latino)             | 200        | 49       | 24.5% |
| 10.7%      0.401      0.659                                           |            |          |       |
| Male / Hispanic or Latino                                             | 157        | 49       | 31.2% |
| 8.4%      0.511      0.840                                            |            |          |       |
| Male / Native American or Alaska Native (Not Hispanic or Latino)      | 18         | 11       | 61.1% |
| 1.0%      1.000      excluded                                         |            |          |       |
| Male / Native Hawaiian or Pacific Islander (Not Hispanic or Latino)   | 16         | 1        | 6.2%  |
| 0.9%      0.102      excluded                                         |            |          |       |
| Male / Two or More Races (Not Hispanic or Latino)                     | 20         | 6        | 30.0% |
| 1.1%      0.491      excluded                                         |            |          |       |
| Male / White (Not Hispanic or Latino)                                 | 393        | 146      | 37.2% |
| 21.0%      0.608      1.000                                           |            |          |       |

under 2% of the data, so an independent auditor may leave them out of the impact ratio; the summary must still give their applicants and rate: Female / Native American or Alaska Native (Not Hispanic or Latino) 7 applicants, rate 57.1%; Female / Native Hawaiian or Pacific Islander (Not Hispanic or Latino) 21 applicants, rate 33.3%; Female / Two or More Races (Not Hispanic or Latino) 18 applicants, rate 16.7%; Male / Native American or Alaska Native (Not Hispanic or Latino) 18 applicants, rate 61.1%; Male / Native Hawaiian or Pacific Islander (Not Hispanic or Latino) 16 applicants, rate 6.2%; Male / Two or More Races (Not Hispanic or Latino) 20 applicants, rate 30.0%

```
[ok ] every selection row is in a category, in an unknown category or left out as unreadable, in
each of the three tables
[ok ] shares of the data add to 100% in each of the three tables

== 6 RCNY 5-301(b): selection rate and impact ratio: impact_ratios
filters   : every category with at least one applicant; selection rate = selected / applicants;
impact ratio = rate / highest rate in the table; unknown category left out and counted; no
threshold applied
rows      : 23
sha256    : 5f25873ec36229e4ba4c8c9897e1b3a46ce68f0e73eeea05da13ad0f094322ea

== Result
input checks : all passed
for Legal    : 1 use(s) marked FOR LEGAL TO CHECK
This is not a bias audit and it does not say any tool passes or fails: Local Law 144 sets no
threshold. Legal decides coverage.
```

## Run 2: planted faults (--plant)

```
input      : GENERATED records (not a real organization), seed 225, mode=plant

== The City's rule (pinned: a different size or hash means the City re-published the file)
6 RCNY 5-300 to 5-304 as adopted (DCWP, effective 2023-07-05): 462675 bytes, Last-Modified Thu,
06 Apr 2023 13:36:03 GMT, sha256 4ecc4463b29440f9b876b0b7319faf2d4c4710b8ad28db9cfa8ae15a123ece2c

== Input checks (register rows: 13; selection rows: 2002)
[ok ] City rule that is not the pinned file: 0
[ok ] the City's worked example recomputed to different figures: 0
[FAIL] register ids listed more than once: 1 (trips on: a duplicated register row)
[FAIL] register rows with no use case id: 1 (trips on: a register row with no id)
[FAIL] register answers in no list (decision, output use, New York City): 1 (trips on: an answer
such as 'overrides' that is not one of your words)
[FAIL] selection candidates listed more than once: 1 (trips on: a duplicated candidate row)
[FAIL] selection rows with no candidate id: 1 (trips on: a row with no candidate id)
[FAIL] selected values that are not in SELECTED_WORDS: 1 (trips on: a selected value such as
'maybe')
[FAIL] sex and race/ethnicity answers in no list: 1 (trips on: an answer such as 'Hispanic' that is
not one of your words)
[info] output_use answers in your word list that no row uses: overrules other factors

== 6 RCNY 5-300: the three tests: use_case_sort ** INCOMPLETE: see input checks **
filters   : every register row, none dropped; first applicable status; an empty or unrecognized
answer is FOR LEGAL TO CHECK, never outside
rows      : 13
sha256    : 15901cc3782b76e1629969e7b943a2c0f6b6f49a773d73ffedf49b8434af4ef3
1 | UC-101 | OUTSIDE THE THREE TESTS AS RECORDED |
2 | UC-102 | FOR LEGAL TO CHECK | may meet test ii
3 | UC-103 | NOT A HIRING OR PROMOTION USE AS RECORDED |
4 | UC-104 | OUTSIDE THE THREE TESTS AS RECORDED |
5 | UC-105 | OUTSIDE THE THREE TESTS AS RECORDED |
6 | UC-106 | NOT A HIRING OR PROMOTION USE AS RECORDED |
7 | UC-107 | NOT USED IN THE CITY AS RECORDED |
8 | UC-108 | FOR LEGAL TO CHECK | output use not recorded or not recognized
9 | UC-109 | FOR LEGAL TO CHECK | may meet test ii
10 | UC-110 | FOR LEGAL TO CHECK | output use not recorded or not recognized
11 | UC-111 | FOR LEGAL TO CHECK | in the city not recorded or not recognized
```

12 | UC-102 | FOR LEGAL TO CHECK | may meet test ii  
 13 | - | FOR LEGAL TO CHECK | decision not recorded or not recognized  
 FOR LEGAL TO CHECK: 7; NOT A HIRING OR PROMOTION USE AS RECORDED: 2; NOT USED IN THE CITY AS RECORDED: 1; OUTSIDE THE THREE TESTS AS RECORDED: 3  
 This sorts uses by what the register says. It does not say a use is or is not covered: Legal decides.

-- sex: applicants in the calculation 1929; in an unknown category (left out, as 5-301(b)(5) asks you to count): 72 (of them, declined to self-identify: 38); selection value unreadable (left out): 1

| category | share | impact ratio | if <2% left out | applicants | selected | rate  |
|----------|-------|--------------|-----------------|------------|----------|-------|
| Female   | 48.1% | 0.892        | 0.892           | 927        | 264      | 28.5% |
| Male     | 51.9% | 1.000        | 1.000           | 1002       | 320      | 31.9% |

-- race/ethnicity: applicants in the calculation 1943; in an unknown category (left out, as 5-301(b)(5) asks you to count): 58 (of them, declined to self-identify: 27); selection value unreadable (left out): 1

| category                                                     | share | impact ratio | if <2% left out | applicants | selected | rate  |
|--------------------------------------------------------------|-------|--------------|-----------------|------------|----------|-------|
| Asian (Not Hispanic or Latino)                               | 18.9% | 0.487        | 0.873           | 367        | 110      | 30.0% |
| Black or African American (Not Hispanic or Latino)           | 18.9% | 0.416        | 0.746           | 367        | 94       | 25.6% |
| Hispanic or Latino                                           | 17.1% | 0.425        | 0.761           | 333        | 87       | 26.1% |
| Native American or Alaska Native (Not Hispanic or Latino)    | 1.3%  | 1.000        | excluded        | 26         | 16       | 61.5% |
| Native Hawaiian or Pacific Islander (Not Hispanic or Latino) | 2.2%  | 0.310        | 0.555           | 42         | 8        | 19.0% |
| Two or More Races (Not Hispanic or Latino)                   | 2.0%  | 0.375        | 0.672           | 39         | 9        | 23.1% |
| White (Not Hispanic or Latino)                               | 39.6% | 0.558        | 1.000           | 769        | 264      | 34.3% |

under 2% of the data, so an independent auditor may leave them out of the impact ratio; the summary must still give their applicants and rate: Native American or Alaska Native (Not Hispanic or Latino) 26 applicants, rate 61.5%

-- sex and race/ethnicity: applicants in the calculation 1873; in an unknown category (left out, as 5-301(b)(5) asks you to count): 128 (of them, declined to self-identify: 64); selection value unreadable (left out): 1

| category                                                              | share | impact ratio | if <2% left out | applicants | selected | rate  |
|-----------------------------------------------------------------------|-------|--------------|-----------------|------------|----------|-------|
| Female / Asian (Not Hispanic or Latino)                               | 9.8%  | 0.525        | 0.863           | 184        | 59       | 32.1% |
| Female / Black or African American (Not Hispanic or Latino)           | 8.5%  | 0.430        | 0.707           | 160        | 42       | 26.2% |
| Female / Hispanic or Latino                                           | 8.3%  | 0.367        | 0.604           | 156        | 35       | 22.4% |
| Female / Native American or Alaska Native (Not Hispanic or Latino)    | 0.4%  | 0.935        | excluded        | 7          | 4        | 57.1% |
| Female / Native Hawaiian or Pacific Islander (Not Hispanic or Latino) | 1.1%  | 0.545        | excluded        | 21         | 7        | 33.3% |
| Female / Two or More Races (Not Hispanic or Latino)                   | 1.0%  | 0.273        | excluded        | 18         | 3        | 16.7% |
| Female / White (Not Hispanic or Latino)                               |       |              |                 | 351        | 104      | 29.6% |

|                                                                     |       |          |     |     |       |
|---------------------------------------------------------------------|-------|----------|-----|-----|-------|
| 18.7%                                                               | 0.485 | 0.798    |     |     |       |
| Male / Asian (Not Hispanic or Latino)                               |       |          | 172 | 50  | 29.1% |
| 9.2%                                                                | 0.476 | 0.782    |     |     |       |
| Male / Black or African American (Not Hispanic or Latino)           |       |          | 200 | 49  | 24.5% |
| 10.7%                                                               | 0.401 | 0.659    |     |     |       |
| Male / Hispanic or Latino                                           |       |          | 157 | 49  | 31.2% |
| 8.4%                                                                | 0.511 | 0.840    |     |     |       |
| Male / Native American or Alaska Native (Not Hispanic or Latino)    |       |          | 18  | 11  | 61.1% |
| 1.0%                                                                | 1.000 | excluded |     |     |       |
| Male / Native Hawaiian or Pacific Islander (Not Hispanic or Latino) |       |          | 16  | 1   | 6.2%  |
| 0.9%                                                                | 0.102 | excluded |     |     |       |
| Male / Two or More Races (Not Hispanic or Latino)                   |       |          | 20  | 6   | 30.0% |
| 1.1%                                                                | 0.491 | excluded |     |     |       |
| Male / White (Not Hispanic or Latino)                               |       |          | 393 | 146 | 37.2% |
| 21.0%                                                               | 0.608 | 1.000    |     |     |       |

under 2% of the data, so an independent auditor may leave them out of the impact ratio; the summary must still give their applicants and rate: Female / Native American or Alaska Native (Not Hispanic or Latino) 7 applicants, rate 57.1%; Female / Native Hawaiian or Pacific Islander (Not Hispanic or Latino) 21 applicants, rate 33.3%; Female / Two or More Races (Not Hispanic or Latino) 18 applicants, rate 16.7%; Male / Native American or Alaska Native (Not Hispanic or Latino) 18 applicants, rate 61.1%; Male / Native Hawaiian or Pacific Islander (Not Hispanic or Latino) 16 applicants, rate 6.2%; Male / Two or More Races (Not Hispanic or Latino) 20 applicants, rate 30.0%

[ok ] every selection row is in a category, in an unknown category or left out as unreadable, in each of the three tables

[ok ] shares of the data add to 100% in each of the three tables

```

== 6 RCNY 5-301(b): selection rate and impact ratio: impact_ratios  ** INCOMPLETE: see input
checks **
filters   : every category with at least one applicant; selection rate = selected / applicants;
impact ratio = rate / highest rate in the table; unknown category left out and counted; no
threshold applied
rows      : 23
sha256    : a54f34103bd9af7b0da448ee41e165d3d879c8cf3eff94361a6c1495e1614d0a

== Result
input checks : FAILED, the lists above are not complete
for Legal    : 7 use(s) marked FOR LEGAL TO CHECK
This is not a bias audit and it does not say any tool passes or fails: Local Law 144 sets no
threshold. Legal decides coverage.

```

### Run 3: the check on the formula (--wrong-denominator)

```

input      : GENERATED records (not a real organization), seed 225, mode=clean

== The City's rule (pinned: a different size or hash means the City re-published the file)
6 RCNY 5-300 to 5-304 as adopted (DCWP, effective 2023-07-05): 462675 bytes, Last-Modified Thu,
06 Apr 2023 13:36:03 GMT, sha256 4ecc4463b29440f9b876b0b7319faf2d4c4710b8ad28db9cfa8ae15a123ece2c

== Input checks (register rows: 7; selection rows: 2000)
[ok ] City rule that is not the pinned file: 0
[FAIL] the City's worked example recomputed to different figures: sex: Male, sex: Female,
race/ethnicity: Hispanic or Latino: 9 (trips on: an impact ratio divided by anything but the most
selected category's rate (run with --wrong-denominator))
[ok ] register ids listed more than once: 0
[ok ] register rows with no use case id: 0

```

```
[ok ] register answers in no list (decision, output use, New York City): 0
[ok ] selection candidates listed more than once: 0
[ok ] selection rows with no candidate id: 0
[ok ] selected values that are not in SELECTED_WORDS: 0
[ok ] sex and race/ethnicity answers in no list: 0
[info] output_use answers in your word list that no row uses: overrules other factors
```

```
== 6 RCNY 5-300: the three tests: use_case_sort  ** INCOMPLETE: see input checks **
filters : every register row, none dropped; first applicable status; an empty or unrecognized
answer is FOR LEGAL TO CHECK, never outside
```

```
rows : 7
sha256 : 8ede27ebdd69332068b3c9d6f267760731c697c273e5866392c7525b1b9c6748
```

```
1 | UC-101 | OUTSIDE THE THREE TESTS AS RECORDED |
2 | UC-102 | FOR LEGAL TO CHECK | may meet test ii
3 | UC-103 | NOT A HIRING OR PROMOTION USE AS RECORDED |
4 | UC-104 | OUTSIDE THE THREE TESTS AS RECORDED |
5 | UC-105 | OUTSIDE THE THREE TESTS AS RECORDED |
6 | UC-106 | NOT A HIRING OR PROMOTION USE AS RECORDED |
7 | UC-107 | NOT USED IN THE CITY AS RECORDED |
```

```
FOR LEGAL TO CHECK: 1; NOT A HIRING OR PROMOTION USE AS RECORDED: 2; NOT USED IN THE CITY AS
RECORDED: 1; OUTSIDE THE THREE TESTS AS RECORDED: 3
```

This sorts uses by what the register says. It does not say a use is or is not covered: Legal decides.

```
-- sex: applicants in the calculation 1928; in an unknown category (left out, as 5-301(b)(5) asks
you to count): 72 (of them, declined to self-identify: 38)
```

| category | share | impact ratio | if <2% left out | applicants selected | rate      |
|----------|-------|--------------|-----------------|---------------------|-----------|
| Female   |       |              |                 | 926                 | 265 28.6% |
| 48.0%    | 1.000 | 1.000        |                 |                     |           |
| Male     |       |              |                 | 1002                | 320 31.9% |
| 52.0%    | 1.116 | 1.116        |                 |                     |           |

```
-- race/ethnicity: applicants in the calculation 1943; in an unknown category (left out, as 5-
301(b)(5) asks you to count): 57 (of them, declined to self-identify: 27)
```

| category                                                     | share | impact ratio | if <2% left out | applicants selected | rate      |
|--------------------------------------------------------------|-------|--------------|-----------------|---------------------|-----------|
| Asian (Not Hispanic or Latino)                               |       |              |                 | 366                 | 110 30.1% |
| 18.8%                                                        | 1.578 | 1.578        |                 |                     |           |
| Black or African American (Not Hispanic or Latino)           |       |              |                 | 368                 | 94 25.5%  |
| 18.9%                                                        | 1.341 | 1.341        |                 |                     |           |
| Hispanic or Latino                                           |       |              |                 | 333                 | 87 26.1%  |
| 17.1%                                                        | 1.372 | 1.372        |                 |                     |           |
| Native American or Alaska Native (Not Hispanic or Latino)    |       |              |                 | 26                  | 16 61.5%  |
| 1.3%                                                         | 3.231 | excluded     |                 |                     |           |
| Native Hawaiian or Pacific Islander (Not Hispanic or Latino) |       |              |                 | 42                  | 8 19.0%   |
| 2.2%                                                         | 1.000 | 1.000        |                 |                     |           |
| Two or More Races (Not Hispanic or Latino)                   |       |              |                 | 39                  | 9 23.1%   |
| 2.0%                                                         | 1.212 | 1.212        |                 |                     |           |
| White (Not Hispanic or Latino)                               |       |              |                 | 769                 | 265 34.5% |
| 39.6%                                                        | 1.809 | 1.809        |                 |                     |           |

under 2% of the data, so an independent auditor may leave them out of the impact ratio; the summary must still give their applicants and rate: Native American or Alaska Native (Not Hispanic or Latino) 26 applicants, rate 61.5%

```
-- sex and race/ethnicity: applicants in the calculation 1873; in an unknown category (left out, as
5-301(b)(5) asks you to count): 127 (of them, declined to self-identify: 64)
```

| category | applicants selected | rate |
|----------|---------------------|------|
|----------|---------------------|------|

|                                                                       |              |                 |       |  |  |
|-----------------------------------------------------------------------|--------------|-----------------|-------|--|--|
| share                                                                 | impact ratio | if <2% left out |       |  |  |
| Female / Asian (Not Hispanic or Latino)                               | 183          | 59              | 32.2% |  |  |
| 9.8%                                                                  | 5.158        | 1.437           |       |  |  |
| Female / Black or African American (Not Hispanic or Latino)           | 161          | 42              | 26.1% |  |  |
| 8.6%                                                                  | 4.174        | 1.163           |       |  |  |
| Female / Hispanic or Latino                                           | 156          | 35              | 22.4% |  |  |
| 8.3%                                                                  | 3.590        | 1.000           |       |  |  |
| Female / Native American or Alaska Native (Not Hispanic or Latino)    | 7            | 4               | 57.1% |  |  |
| 0.4%                                                                  | 9.143        | excluded        |       |  |  |
| Female / Native Hawaiian or Pacific Islander (Not Hispanic or Latino) | 21           | 7               | 33.3% |  |  |
| 1.1%                                                                  | 5.333        | excluded        |       |  |  |
| Female / Two or More Races (Not Hispanic or Latino)                   | 18           | 3               | 16.7% |  |  |
| 1.0%                                                                  | 2.667        | excluded        |       |  |  |
| Female / White (Not Hispanic or Latino)                               | 351          | 105             | 29.9% |  |  |
| 18.7%                                                                 | 4.786        | 1.333           |       |  |  |
| Male / Asian (Not Hispanic or Latino)                                 | 172          | 50              | 29.1% |  |  |
| 9.2%                                                                  | 4.651        | 1.296           |       |  |  |
| Male / Black or African American (Not Hispanic or Latino)             | 200          | 49              | 24.5% |  |  |
| 10.7%                                                                 | 3.920        | 1.092           |       |  |  |
| Male / Hispanic or Latino                                             | 157          | 49              | 31.2% |  |  |
| 8.4%                                                                  | 4.994        | 1.391           |       |  |  |
| Male / Native American or Alaska Native (Not Hispanic or Latino)      | 18           | 11              | 61.1% |  |  |
| 1.0%                                                                  | 9.778        | excluded        |       |  |  |
| Male / Native Hawaiian or Pacific Islander (Not Hispanic or Latino)   | 16           | 1               | 6.2%  |  |  |
| 0.9%                                                                  | 1.000        | excluded        |       |  |  |
| Male / Two or More Races (Not Hispanic or Latino)                     | 20           | 6               | 30.0% |  |  |
| 1.1%                                                                  | 4.800        | excluded        |       |  |  |
| Male / White (Not Hispanic or Latino)                                 | 393          | 146             | 37.2% |  |  |
| 21.0%                                                                 | 5.944        | 1.656           |       |  |  |

under 2% of the data, so an independent auditor may leave them out of the impact ratio; the summary must still give their applicants and rate: Female / Native American or Alaska Native (Not Hispanic or Latino) 7 applicants, rate 57.1%; Female / Native Hawaiian or Pacific Islander (Not Hispanic or Latino) 21 applicants, rate 33.3%; Female / Two or More Races (Not Hispanic or Latino) 18 applicants, rate 16.7%; Male / Native American or Alaska Native (Not Hispanic or Latino) 18 applicants, rate 61.1%; Male / Native Hawaiian or Pacific Islander (Not Hispanic or Latino) 16 applicants, rate 6.2%; Male / Two or More Races (Not Hispanic or Latino) 20 applicants, rate 30.0%

[ok ] every selection row is in a category, in an unknown category or left out as unreadable, in each of the three tables

[ok ] shares of the data add to 100% in each of the three tables

== 6 RCNY 5-301(b): selection rate and impact ratio: impact\_ratios \*\* INCOMPLETE: see input checks \*\*

filters : every category with at least one applicant; selection rate = selected / applicants; impact ratio = rate / highest rate in the table; unknown category left out and counted; no threshold applied

rows : 23

sha256 : f908eea6696745b7d4e3be485b424aa8c785ae5ba913a6979a7a8e315e4e29e0

== Result

input checks : FAILED, the lists above are not complete

for Legal : 1 use(s) marked FOR LEGAL TO CHECK

This is not a bias audit and it does not say any tool passes or fails: Local Law 144 sets no threshold. Legal decides coverage.

---

## How to read the results

- **A status is a prompt for Legal, not a finding.** `FOR LEGAL TO CHECK` means the register says the use may meet a test, or the register is silent or not recognized. `OUTSIDE THE THREE TESTS AS RECORDED` is only as good as the register's answer.
- **An impact ratio is a number, not a verdict.** The law sets no pass mark for it and the script applies none.
- **Both columns of the 2% option matter.** Which one an auditor uses, and why, goes in the published summary.
- **The unknown count is part of the result.** Report it with the tables.

---

## Checklist

| Done                     | Check                                                                                                                                                    |
|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <input type="checkbox"/> | The City's rule is pinned: the run prints 462675 bytes and the same SHA-256, or you have read the changed text.                                          |
| <input type="checkbox"/> | The City's worked example (the sex and race/ethnicity tables) recomputes to the figures the rule prints (the input check shows [ok]).                    |
| <input type="checkbox"/> | Your register has one row for each Claude use in HR, each with an id, a decision, an output use, a New York City answer and an owner.                    |
| <input type="checkbox"/> | Every answer in your files is in one of the word lists; no input check fails.                                                                            |
| <input type="checkbox"/> | Every <code>FOR LEGAL TO CHECK</code> row, and every row whose answer you doubt, is with your counsel.                                                   |
| <input type="checkbox"/> | You have read both columns of the 2% option and know which one your auditor uses.                                                                        |
| <input type="checkbox"/> | The unknown-category count is reported next to each table.                                                                                               |
| <input type="checkbox"/> | You have an independent auditor, an audit within one year before use, a published summary and notice to candidates: none of these comes from the script. |

---

## Limits

- **This is not a client result.** The records are generated. The runs show the script finds planted faults and reproduces the sex and race/ethnicity tables in the City's example. They say nothing about any real tool or company.
- **This is not a bias audit,** and Data Meaning is not an auditor. The law requires an independent auditor and a published summary.

- **The script does not decide whether Local Law 144 covers a use.** It sorts uses by what your register says. Legal decides.
- **It calculates selection rates only.** For a tool that scores candidates, the rule uses a scoring rate based on the sample's median score (section 5-301(c)). The script does not calculate it.
- **The three tests need a simplified output.** A register answer that says there is none puts the use outside the tests as recorded. If the answer is wrong, so is the status.
- **Sex and race/ethnicity are sensitive data.** Not every applicant gives their sex or race/ethnicity, and the unknown category counts those people.
- **Our reading is not the City's.** The mapping from register answers to the tests, treating a declined answer as unknown, and the 2% share, are ours. We have not asked DCWP to review them. The rule may be amended: check the City's pages for the current text.

---

## Sources

- NYC Council, [Local Law 144 of 2021](#) (read 2026-10-31)
- DCWP, [adopted rule text, 6 RCNY 5-300 and following](#) (read 2026-10-31)
- NYC Rules, [adopted rule page](#) (read 2026-10-31)
- DCWP, [AEDT frequently asked questions](#) (read 2026-10-31)
- DCWP, [automated employment decision tools](#) (read 2026-10-31)
- DuckDB, [CSV overview](#) (read 2026-10-31)
- Data Meaning, [Control Tower for Claude](#) (read 2026-10-31)

### Where Control Tower for Claude runs

Control Tower for Claude runs in your own Azure subscription. See how it is set up on the [Control Tower for Claude solution page](#).