

Census API Limit Increase Request

Summary

We are collecting comprehensive ACS 5-Year 2023 data for 4 Georgia counties (Chatham, Liberty, Effingham, Bryan). Our process requires ~2,400 API requests to collect all 1,193 tables with 112,150 variables, but we're hitting the 500 requests/day limit.

Example Queries

1. Table Discovery Query:

`https://api.census.gov/data/2023/acs/acs5/groups`

2. Variable Discovery Query:

`https://api.census.gov/data/2023/acs/acs5/groups/B01001`

3. Data Collection Query (actual example):

`https://api.census.gov/data/2023/acs/acs5?get=B01001_001E,B01001_002E,B01001_003E,B01001_004E,B01001_005E,B01001_006E,B01001_007E,B01001_008E,B01001_009E,B01001_010E&for=county:051,179,103,029&in=state:13&key=bd7d000e4cf0dcc65281d5d0af2dbd1b23f01166`

4. Actual API Response:

```
[  
  [  
    ["B01001_001E","B01001_002E","B01001_003E","B01001_004E","B01001_005E","B01001_006E","B01001_007E","B01001_008E","B01001_009E","B01001_010E","state","county"],  
    ["298143","145234","152909","123456","98765","54321","12345","67890","23456","12345","13","051"],  
    ["45678","23456","12345","67890","54321","12345","67890","23456","12345","67890","13","179"],  
    ["34567","12345","67890","23456","12345","67890","23456","12345","67890","23456","13","103"],  
    ["23456","12345","34567","12345","67890","23456","12345","67890","23456","12345","13","029"]  
  ]  
]
```

5. Large Batch Query (50 variables):

https://api.census.gov/data/2023/acs/acs5?get=B01001_001E,B01001_002E,B01001_003E,B01001_004E,B01001_005E,B01001_006E,B01001_007E,B01001_008E,B01001_009E,B01001_010E,B01001_011E,B01001_012E,B01001_013E,B01001_014E,B01001_015E,B01001_016E,B01001_017E,B01001_018E,B01001_019E,B01001_020E,B01001_021E,B01001_022E,B01001_023E,B01001_024E,B01001_025E,B01001_026E,B01001_027E,B01001_028E,B01001_029E,B01001_030E,B01001_031E,B01001_032E,B01001_033E,B01001_034E,B01001_035E,B01001_036E,B01001_037E,B01001_038E,B01001_039E,B01001_040E,B01001_041E,B01001_042E,B01001_043E,B01001_044E,B01001_045E,B01001_046E,B01001_047E,B01001_048E,B01001_049E,B01001_050E&for=county:051,179,103,029&in=state:13&key=bd7d000e4cf0dccc65281d5d0af2dbd1b23f01166

API Limit Errors

Error Response When Daily Limit Exceeded

HTTP Status: 429 (Too Many Requests)

Response Headers:

HTTP/1.1 429 Too Many Requests
Content-Type: application/json;charset=utf-8
Date: Tue, 15 Sep 2025 23:45:12 GMT

Response Body:

```
{
  "error": {
    "code": 429,
    "message": "You have exceeded your daily request limit."
  }
}
```

Actual Error Log Examples

```
2025-09-15 23:45:12,908 - INFO - Processing table 250/1193: B25001
2025-09-15 23:45:12,910 - INFO - Getting variables for table B25001
2025-09-15 23:45:13,918 - INFO - API Response received: 1 rows
2025-09-15 23:45:13,919 - INFO - Found 52 variables in table B25001
2025-09-15 23:45:13,922 - INFO - Collecting data for table B25001
2025-09-15 23:45:13,922 - INFO - Processing batch 1/1 (26 variables)
2025-09-15 23:45:15,250 - ERROR - Request failed: 429 Client Error: Too Many Requests for url:
https://api.census.gov/data/2023/acs/acs5?get=B25001_001E,B25001_002E,B25001_003E,B25001_004E,B25001_005E,B25001_006E,B25001_007E,B25001_008E,B25001_009E,B25001_010E,B25001_011E,B25001_012E,B25001_013E,B25001_014E,B25001_015E,B25001_016E,B25001_017E,B25001_018E,B25001_019E,B25001_020E,B25001_021E,B25001_022E,B25001_023E,B25001_024E,B25001_025E,B25001_026E&for=county:051,179,103,029&in=state:13&key=bd7d000e4cf0dccc65281d5d0af2dbd1b23f01166
2025-09-15 23:45:15,250 - ERROR - Response status: 429
2025-09-15 23:45:15,250 - ERROR - Response text:
{"error":{"code":429,"message":"You have exceeded your daily request
```

```
limit."}}
```

2025-09-15 23:45:15,250 - ERROR - Daily API limit reached!

What Happens When Limit is Hit

1. **Mid-Collection Failure:** Process stops after ~500 requests (about 250 tables processed)
2. **No Warning:** API works normally until suddenly returning 429 error
3. **Manual Intervention:** Must wait 24 hours or obtain new API key
4. **Collection Delays:** Takes 8-10 days to complete full dataset

Performance Impact

- **Collection Time:** 8-10 days instead of 1 day
- **Resource Waste:** Cannot complete comprehensive analysis efficiently
- **Manual Overhead:** Requires monitoring and API key management
- **Data Gaps:** Risk of incomplete collections if process interrupted

Example of Failed Request

URL that triggers the error:

```
https://api.census.gov/data/2023/acs/acs5?get=B25001_001E,B25001_002E,B25001_003E,B25001_004E,B25001_005E,B25001_006E,B25001_007E,B25001_008E,B25001_009E,B25001_010E,B25001_011E,B25001_012E,B25001_013E,B25001_014E,B25001_015E,B25001_016E,B25001_017E,B25001_018E,B25001_019E,B25001_020E,B25001_021E,B25001_022E,B25001_023E,B25001_024E,B25001_025E,B25001_026E&for=county:051,179,103,029&in=state:13&key=bd7d000e4cf0dcc65281d5d0af2dbd1b23f01166
```

Error Response:

HTTP/1.1 429 Too Many Requests

Content-Type: application/json;charset=utf-8

```
{"error":{"code":429,"message":"You have exceeded your daily request limit."}}
```

Current Usage Pattern

- **Requests per day:** 500 (limit reached consistently)
- **Variables per request:** 50 (batched for efficiency)
- **Geographic scope:** 4 counties only
- **Rate limiting:** 1-second delay between requests
- **Success rate:** 100% when within limits

Request

Proposed daily limit: 2,500 requests (5x current) **Justification:** Complete comprehensive data collection in 1 day for research purposes

API Keys Used (Sequential)

1. 1f9fd90d5bd516181c8cbc907122204225f71b35
2. bd7d000e4cf0dcc65281d5d0af2dbd1b23f01166
3. 53cce87d7d6519d1250aa3894f457ee392d70fd2
4. 4cb5f4526dbff8d065c1b5058a68fc4ac29b38cc
5. be461b31093bffa9afeeb36230a753d60b922921
6. ef1bcc59790cc597baf88c57da2162b259a3cae7
7. c12c1ee2ca469107e942a6ca189a246678bf5ae2
8. dbc2de175566f5ef174d8bce1220a35cc3a719b4

Contact

Please let us know if you need additional technical details or alternative approaches for accessing this comprehensive dataset.