

# AADT\_EX\_SUS

October 31, 2017

```
In [1]: from utility import db_connect, query2csv
        from settings import DBNAME, DBPASS, DBUSER, DBHOST
```

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In [2]: qsql="""
        with d as (
            select generate_series(0,6) as dayofweek
        ),
        m as (
            select generate_series(1,12) as month
        ),
        -- v_ijmy: Compute an average by day of week for each month.
        v_ijmy as (
            select
                baadv.analysis_area_id,
                to_char(baadv.date, 'YYYY') as year,
                avg(baadv.volume)::bigint as volume_i,
                avg(baadv.volume) as volume,
                d.dayofweek,
                m.month
            from
                baa_ex_sus.analysis_areas_daily_volume as baadv,
                d,
                m
            where
                extract(dow from baadv.date) in (d.dayofweek)
                AND date_part('month', baadv.date) = m.month
            group by baadv.analysis_area_id, year, d.dayofweek, m.month
        ),
        -- madt: average volume each month, each year for sites
        madt as (
            select
                analysis_area_id,
                month,
                year,
                avg(volume)::bigint as volume_i,
                avg(volume) as volume
            from
                v_ijmy
```

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        group by analysis_area_id, year, month
        having count(dayofweek)=7 -- having 7 days of data
    ),
    -- AADT: average volume count each year for sites
    AADT_DATA as (
    select
        analysis_area_id,
        year,
        avg(volume)::bigint as AADT_i,
        round(avg(volume), 2) as AADT
    from madt
        group by analysis_area_id, year
        having count(month) = 12
    )
    select
        ad.*,
        baas.analysis_area_name,
        baas.mode
    from
        AADT_DATA as ad inner join baa.analysis_areas as baas using(analysis_area_id)
        order by 1,2
    """
    csvfile='aadt-ex-sus.csv'
    query2csv(qsql,csvfile)

```

<IPython.core.display.HTML object>