

Student Presentation

Nearest School Name, distance

By

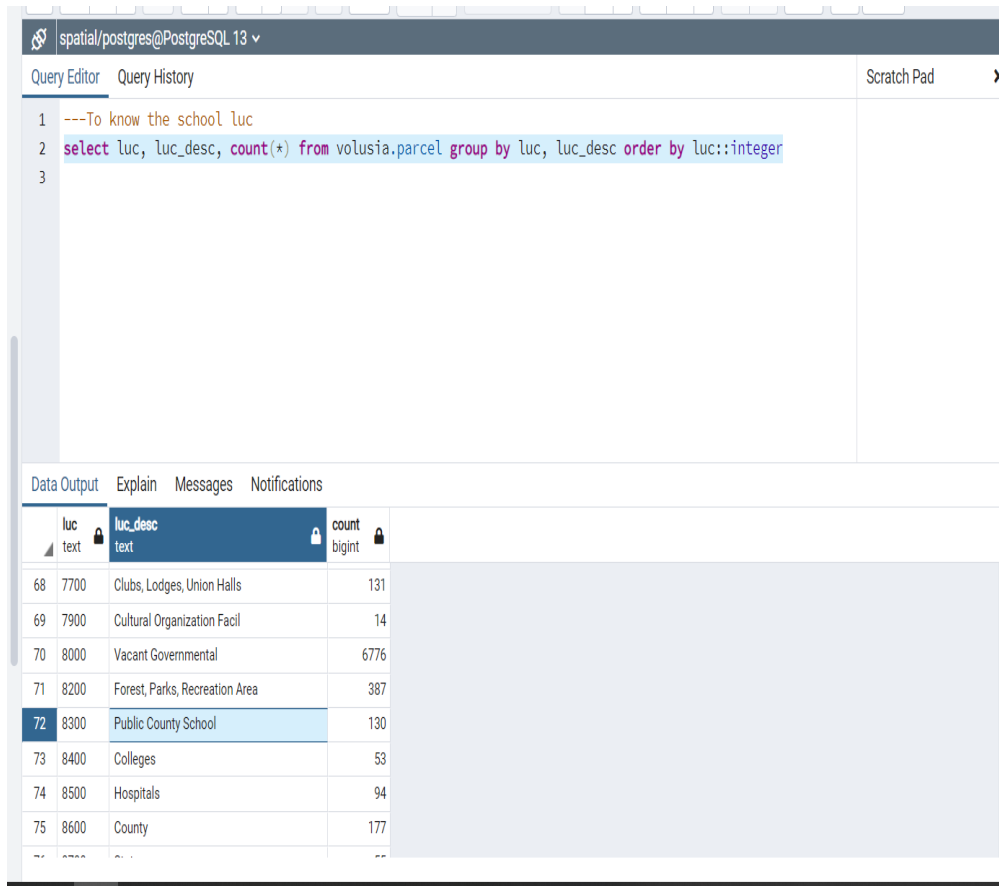
Hanan Alshahrani

&

Mohammed Al-Buhayri

-To know the school luc

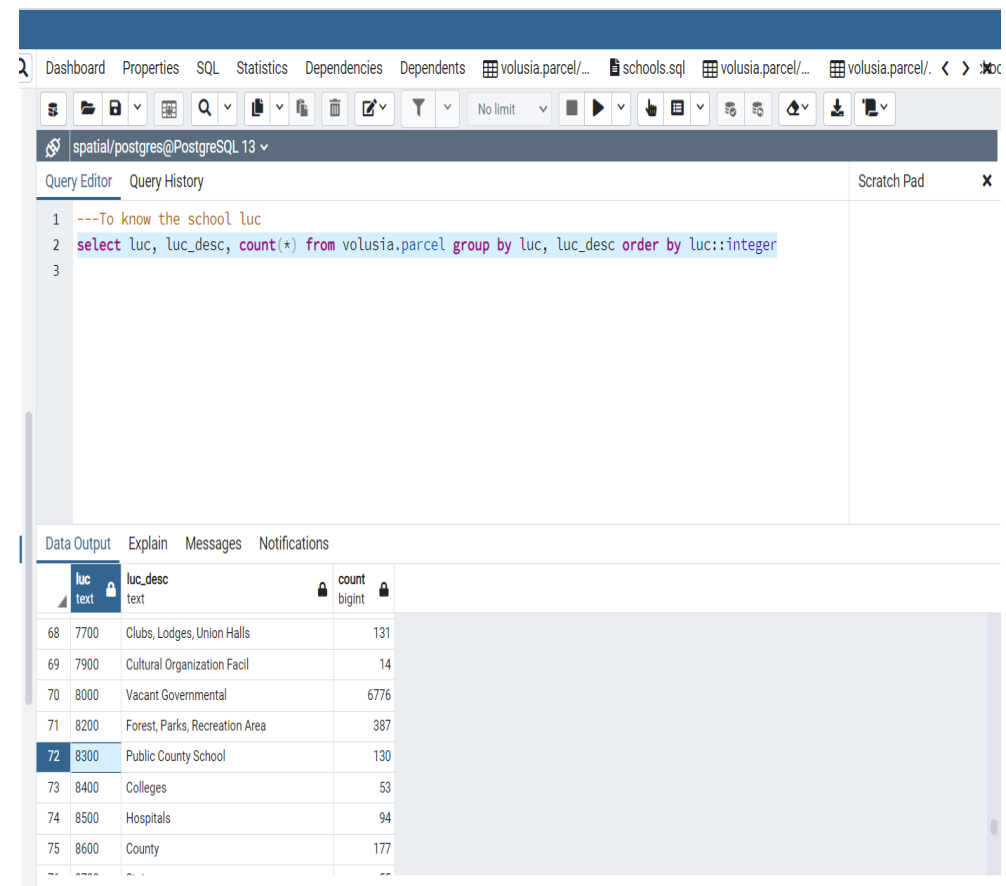
select luc, luc_desc, count(*) from volusia.parcel group by luc, luc_desc order by luc::integer



The screenshot shows a PostgreSQL query editor interface. The query editor has tabs for 'Query Editor', 'Query History', and 'Scratch Pad'. The query is: `1 ---To know the school luc`
`2 select luc, luc_desc, count(*) from volusia.parcel group by luc, luc_desc order by luc::integer`
`3`

The 'Data Output' tab is selected, showing a table with the following data:

	luc	luc_desc	count
	text	text	bigint
68	7700	Clubs, Lodges, Union Halls	131
69	7900	Cultural Organization Facil	14
70	8000	Vacant Governmental	6776
71	8200	Forest, Parks, Recreation Area	387
72	8300	Public County School	130
73	8400	Colleges	53
74	8500	Hospitals	94
75	8600	County	177



The screenshot shows a PostgreSQL query editor interface. The query editor has tabs for 'Query Editor', 'Query History', and 'Scratch Pad'. The query is: `1 ---To know the school luc`
`2 select luc, luc_desc, count(*) from volusia.parcel group by luc, luc_desc order by luc::integer`
`3`

The 'Data Output' tab is selected, showing a table with the following data:

	luc	luc_desc	count
	text	text	bigint
68	7700	Clubs, Lodges, Union Halls	131
69	7900	Cultural Organization Facil	14
70	8000	Vacant Governmental	6776
71	8200	Forest, Parks, Recreation Area	387
72	8300	Public County School	130
73	8400	Colleges	53
74	8500	Hospitals	94
75	8600	County	177

- The school in the county have luc of 8300

select * from volusia.parcel where luc='8300'

select count(*) from volusia.parcel where luc='8300'

Dashboard Properties SQL Statistics Dependencies Dependents volusia.parcel/... schools.sql volusia.parcel/... volusia.parcel/...

spatial/postgres@PostgreSQL 13

Query Editor Query History Scratch Pad

```
1 ---To know the school luc
2 select luc, luc_desc, count(*) from volusia.parcel group by luc, luc_desc order by luc::integer
3
4 select * from volusia.parcel where luc='8300'
5 select count(*) from volusia.parcel where luc='8300'
6
```

Data Output Explain Messages Notifications

	parid double precision	taxyr double precision	roltype text	acctype text	dorid text	alt_id text	luc text	luc_desc text	taxdist text	taxdist_desc text	
1	3364708		2021	REAL	[null]	3218300...	8230010...	8300	Public County School	100	UNINCORF
2	3438809		2021	REAL	[null]	3315280...	5328042...	8300	Public County School	401	SOUTH DA
3	2374551		2021	REAL	[null]	3018110...	8011082...	8300	Public County School	014	ORANGE C
4	3589661		2021	REAL	[null]	3316060...	6306010...	8300	Public County School	402	PORT ORA
5	3699238		2021	REAL	[null]	3317100...	7310000...	8300	Public County School	600	UNINCORF
6	3876903		2021	REAL	[null]	3417413...	7441300...	8300	Public County School	601	NEW SMYI
7	3884787		2021	REAL	[null]	3417440...	7444031...	8300	Public County School	601	NEW SMYI
8	5326136		2021	REAL	[null]	3118200...	8120000...	8300	Public County School	016	DELTONA

Dashboard Properties SQL Statistics Dependencies Dependents volusia.parcel/... schools.sql volusia.parcel/... volusia.parcel/...

spatial/postgres@PostgreSQL 13

Query Editor Query History Scratch Pad

```
1 ---To know the school luc
2 select luc, luc_desc, count(*) from volusia.parcel group by luc, luc_desc order by luc::integer
3
4 select * from volusia.parcel where luc='8300'
5 select count(*) from volusia.parcel where luc='8300'
6
```

Data Output Explain Messages Notifications

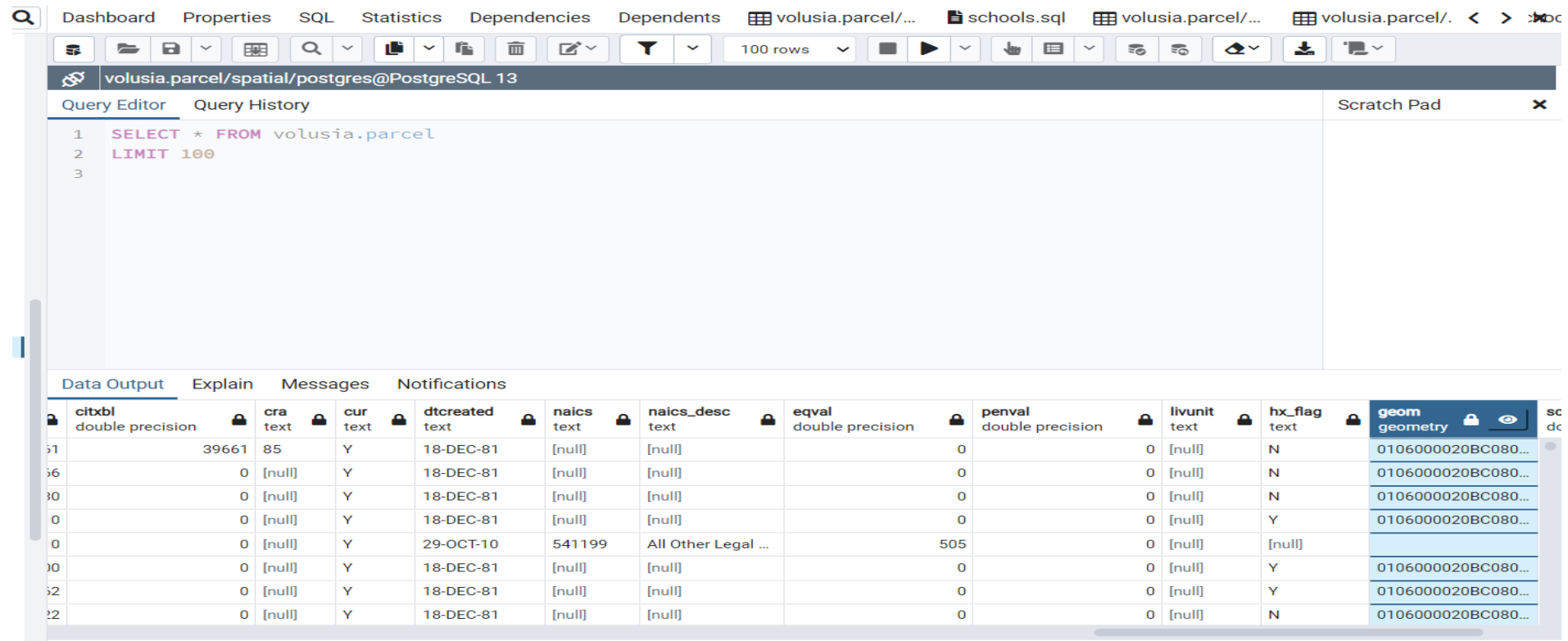
	count bigint
1	130

- Add the geometry column to the parcel table and update it

SELECT Add Geometry Column

('volusia','parcel','geom',2236,'MULTIPOLYGON',2);

update volusia.parcel a set geom = p.geom from volusia.gis_parcel p where a.parid=p.altkey;



The screenshot shows a PostgreSQL query editor interface. The top bar includes tabs for Dashboard, Properties, SQL, Statistics, Dependencies, and Dependents. The main query editor displays the following SQL query:

```
1 SELECT * FROM volusia.parcel
2 LIMIT 100
3
```

Below the query editor, the 'Data Output' tab is active, showing a table with the following columns: citxbl, cra, cur, dtcreated, naics, naics_desc, eqval, penval, livunit, hx_flag, and geom. The geom column is highlighted in blue. The table contains 10 rows of data, with the first row showing a geometry value: 0106000020BC080...

citxbl	cra	cur	dtcreated	naics	naics_desc	eqval	penval	livunit	hx_flag	geom
39661	85	Y	18-DEC-81	[null]	[null]	0	0	[null]	N	0106000020BC080...
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	N	0106000020BC080...
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	N	0106000020BC080...
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	Y	0106000020BC080...
0	[null]	Y	29-OCT-10	541199	All Other Legal ...	505	0	[null]	[null]	0106000020BC080...
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	Y	0106000020BC080...
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	Y	0106000020BC080...
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	N	0106000020BC080...

- Create gis_schools and make geometry into volusia.gis_schools
select parid, geom into volusia.gis_schools from volusia.parcel where
luc='8300';

DashboardPropertiesSQLStatisticsDependenciesDependents

volusia.gis_schools/spatial/postgres@PostgreSQL 13

Query EditorQuery History

1

SELECT * FROM volusia.gis_schools

2

LIMIT 100

3

Data Output

Explain

Messages

Notifications

	parid double precision	geom geometry
1	5025659	0106000020BC0800000100000000103000000010000...
2	2292300	0106000020BC0800000100000000103000000010000...
3	3532139	0106000020BC0800000100000000103000000010000...
4	3578911	0106000020BC0800000100000000103000000010000...
5	3364848	0106000020BC0800000100000000103000000010000...
6	3578902	0106000020BC0800000100000000103000000010000...
7	3065590	0106000020BC0800000100000000103000000010000...
8	3094417	0106000020BC0800000100000000103000000010000...
9	5429601	0106000020BC0800000100000000103000000010000...

- Create Volusia.parcel_schools table and add the data from owner and parcel tables
drop table if exists Volusia.parcel_schools ;
select p.parid, p.luc,p.luc_desc,o.own1 as school_name into volusia.parcel_schools
from volusia.owner
o join volusia.parcel p on o.parid=p.parid where p.luc='8300';

The screenshot shows the PgAdmin interface with a SQL query executed in the Query Editor. The query is:

```
1 SELECT * FROM volusia.parcel_schools
2 LIMIT 100
3
```

The results are displayed in the Data Output tab, showing a table with the following columns: parid, luc, luc_desc, and school_name. The table contains 100 rows of data, with the first 10 rows visible in the screenshot.

parid	luc	luc_desc	school_name
74	2292181	8300	Public County School
75	2282941	8300	Public County School
76	2460725	8300	Public County School
77	5310868	8300	Public County School
78	3589661	8300	Public County School
79	3510968	8300	Public County School
80	5498735	8300	Public County School
81	2995700	8300	Public County School
82	2264001	8300	Public County School

- Add sch_typ column to the volusia.parcel_schools

alter table volusia.parcel_schools add column sch_type char(20);

update volusia.parcel_schools set sch_type='Elementary' where school_name ilike '%elem%';

update volusia.parcel_schools set sch_type='Middle' where school_name ilike '%mid%';

update volusia.parcel_schools set sch_type='High' where school_name ilike '%High%';

select sch_type, count(*) from volusia.parcel_schools group by sch_type;

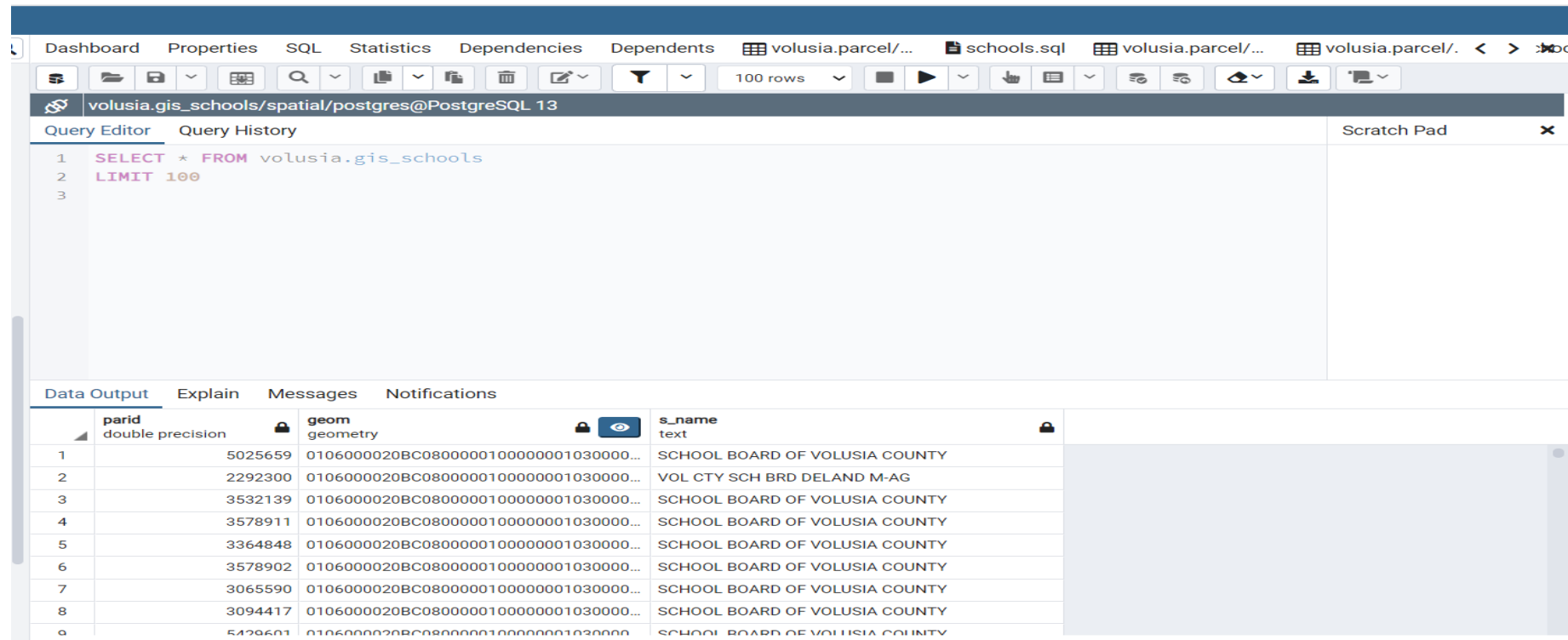
The screenshot shows a PostgreSQL query editor interface. The top navigation bar includes tabs for Dashboard, Properties, SQL, Statistics, Dependencies, and Dependents. The current view is the SQL editor, showing a query to select the first 100 rows from the volusia.parcel_schools table. Below the editor, the 'Data Output' tab is active, displaying a table with 7 columns: row number, parid, luc, luc_desc, school_name, and sch_type. The results show a list of schools with their corresponding sch_type values.

	parid double precision	luc text	luc_desc text	school_name text	sch_type character (20)
74	2292181	8300	Public County School	VOL CTY SCH BRD DELAND MIDDLE	Middle
75	2282941	8300	Public County School	VOL CTY SCH BRD SOUTHWEST MID	Middle
76	2460725	8300	Public County School	VOL CTY SCH BRD DELTONA MIDDLE	Middle
77	5310868	8300	Public County School	VOL CTY SCH BRD DDD HIGH	High
78	3589661	8300	Public County School	VOL CTY SCH BRD ATLANTIC HIGH	High
79	3510000	8300	Public County School	SCHOOL BOARD OF VOLUSIA COUNTY	

- Add school names into gis_schools

alter table volusia.gis_schools add column s_name text;

update volusia.gis_schools g set s_name = s.school_name from
volusia.parcel_schools s where g.parid=s.parid;



The screenshot shows a PostgreSQL query editor interface. The top navigation bar includes tabs for Dashboard, Properties, SQL, Statistics, Dependencies, and Dependents. The current tab is 'SQL', and the file 'schools.sql' is open. The query editor shows a query to select all data from the 'gis_schools' table, limited to 100 rows. The results are displayed in a table with columns: parid (double precision), geom (geometry), and s_name (text). The results show 10 rows of data, all with the same school name: 'SCHOOL BOARD OF VOLUSIA COUNTY'.

	parid double precision	geom geometry	s_name text
1	5025659	0106000020BC0800000100000001030000...	SCHOOL BOARD OF VOLUSIA COUNTY
2	2292300	0106000020BC0800000100000001030000...	VOL CTY SCH BRD DELAND M-AG
3	3532139	0106000020BC0800000100000001030000...	SCHOOL BOARD OF VOLUSIA COUNTY
4	3578911	0106000020BC0800000100000001030000...	SCHOOL BOARD OF VOLUSIA COUNTY
5	3364848	0106000020BC0800000100000001030000...	SCHOOL BOARD OF VOLUSIA COUNTY
6	3578902	0106000020BC0800000100000001030000...	SCHOOL BOARD OF VOLUSIA COUNTY
7	3065590	0106000020BC0800000100000001030000...	SCHOOL BOARD OF VOLUSIA COUNTY
8	3094417	0106000020BC0800000100000001030000...	SCHOOL BOARD OF VOLUSIA COUNTY
9	5429601	0106000020BC0800000100000001030000...	SCHOOL BOARD OF VOLUSIA COUNTY

- The closest school to a random parcel and school name

select p.parid, p.geom, s.school_name, ST_Distance(p.geom, (select p2.geom from volusia.parcel p2

where p2.parid=4841709))/5280 as school_dist

from volusia.parcel p join volusia.parcel_schools s on p.parid=s.parid

where p.luc='8300'

order by p.geom <-> (select p2.geom from volusia.parcel p2 where p2.parid=4841709) limit 1;

spatial/postgres@PostgreSQL 13

Query Editor

```
1 --The closest school to a random parcel and school name
2 select p.parid, p.geom, s.school_name, ST_Distance(p.geom, (select p2.geom from volusia.parcel p2
3 where p2.parid=4841709))/5280 as school_dist
4 from volusia.parcel p join volusia.parcel_schools s on p.parid=s.parid
5 where p.luc='8300'
6 order by p.geom <-> (select p2.geom from volusia.parcel p2 where p2.parid=4841709) limit 1;
```

Data Output

	parid double precision	geom geometry	school_name text	school_dist double precision
1	4084614	0106000020BC080000010000000103000000...	VOL CTY SCH BRD OSTEEN ELEM	3.307340335519322

- Add **scdistance** column to the parcel table
- alter table volusia.parcel add column scdistance double precision;

Dashboard Properties SQL Statistics Dependencies Dependents volusia.parcel/... schools.sql volusia.parcel/... volusia.parcel/...

volusia.parcel/spatial/postgres@PostgreSQL 13

Query Editor Query History Scratch Pad

```
1 SELECT * FROM volusia.parcel
2 LIMIT 100
3
```

Data Output Explain Messages Notifications

	cra text	cur text	dtcreated text	naics text	naics_desc text	equal double precision	penval double precision	livunit text	hx_flag text	geom geometry	scdistance double precision
31	85	Y	18-DEC-81	[null]	[null]	0	0	[null]	N	0106000020BC080...	2.30338824057521
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	N	0106000020BC080...	0.50242238529683
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	N	0106000020BC080...	0.06590603885558746
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	Y	0106000020BC080...	0
0	[null]	Y	29-OCT-10	541199	All Other Legal ...	505	0	[null]	[null]		[null]
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	Y	0106000020BC080...	0.4677979284479434
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	Y	0106000020BC080...	0.4653579290381655
0	[null]	Y	18-DEC-81	[null]	[null]	0	0	[null]	N	0106000020BC080...	0.3522806604947519

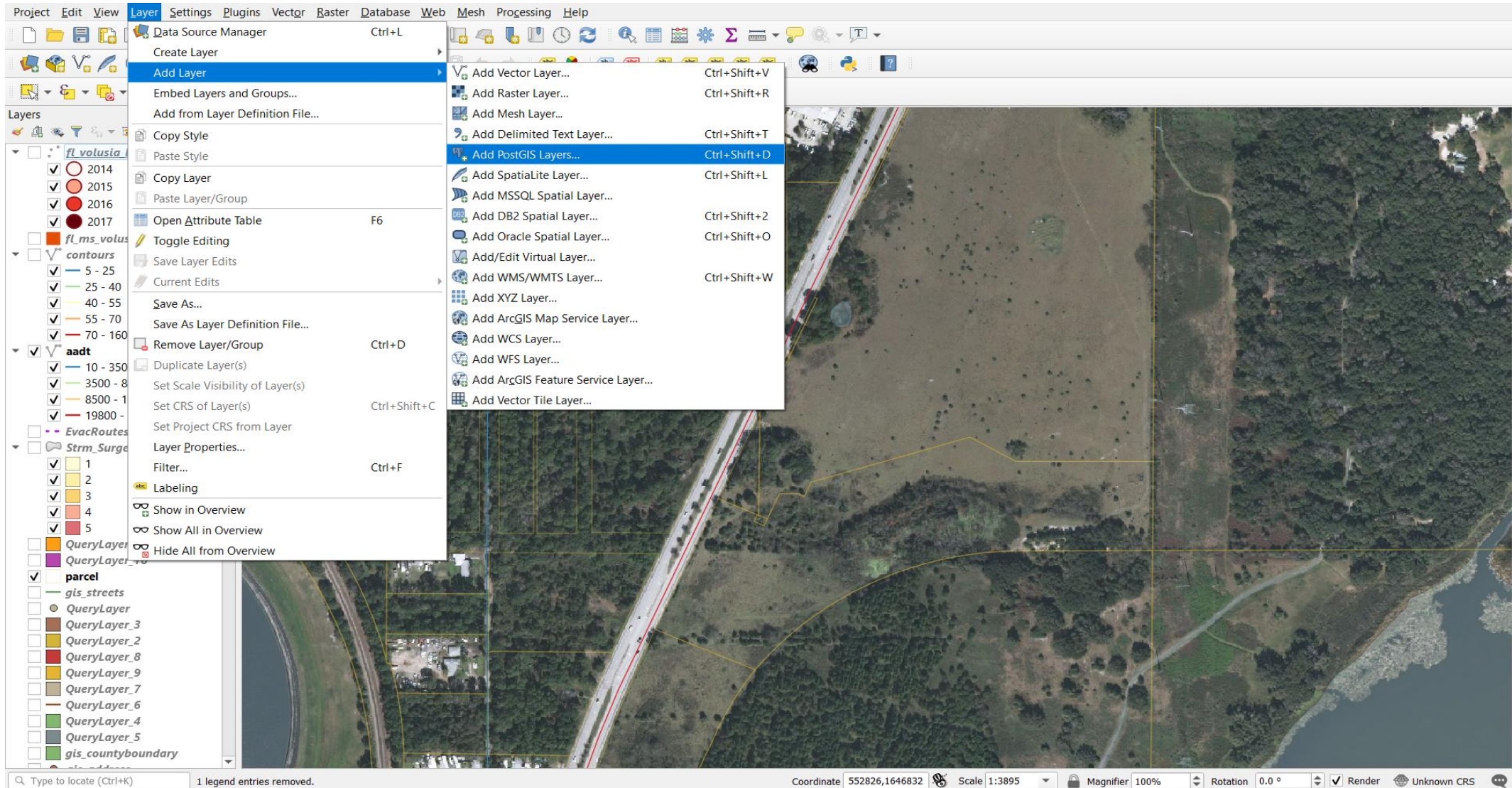
- Create index are vital in pgAdmin

```
create index idx_parcel_luc on volusia.parcel (luc);  
create index idx_parcel on volusia.parcel (parid);
```

```
CREATE INDEX parcel_geom_idx  
ON volusia.parcel  
USING GIST (geom);
```

```
vacuum analyze volusia.parcel;
```

- Add Postgres layer in QGIS(gis_Schools)



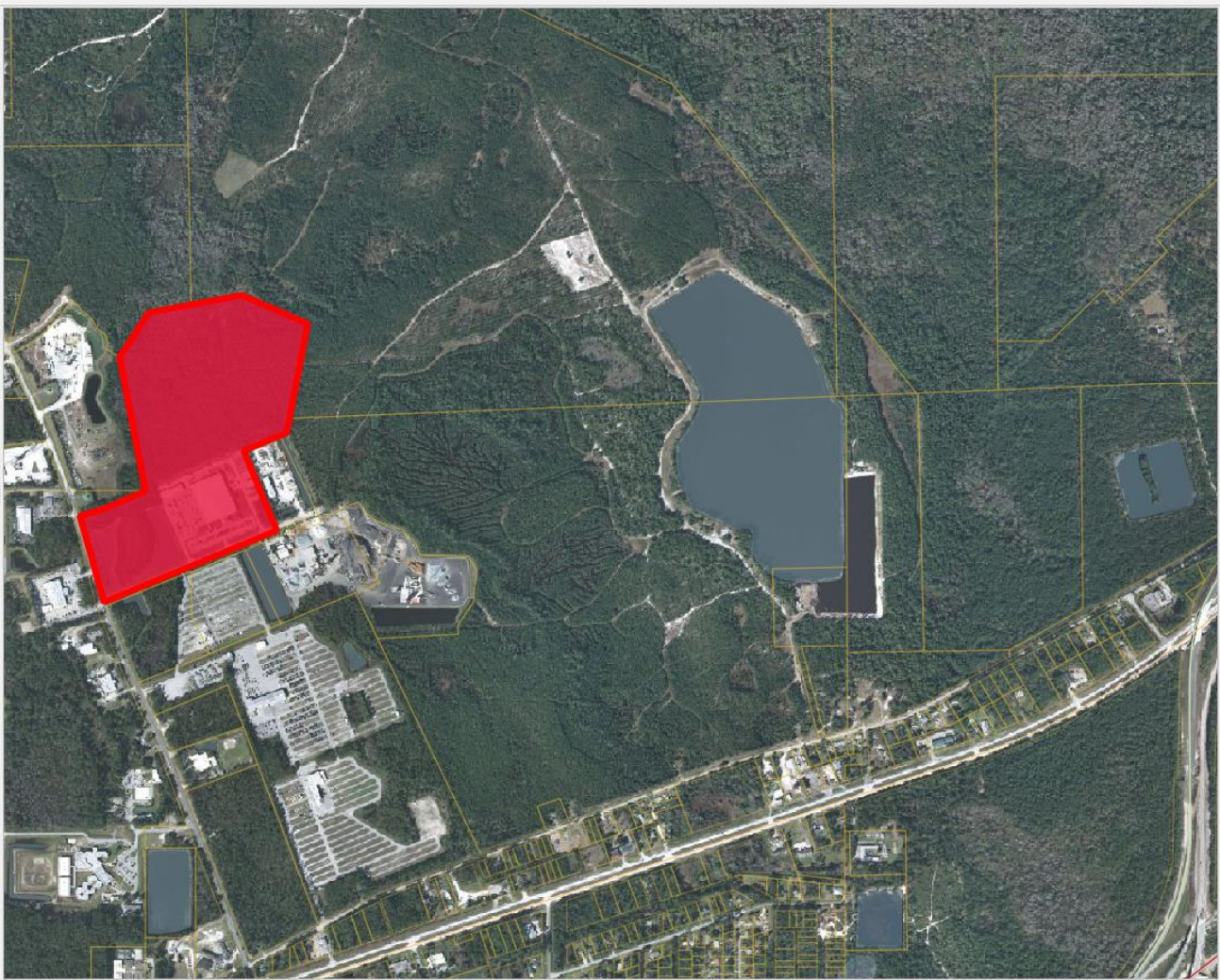
Project Edit View Layer Settings Plugins Vector Raster Database Web Mesh Processing Help

File Edit View Layer Settings Plugins Vector Raster Database Web Mesh Processing Help

File Edit View Layer Settings Plugins Vector Raster Database Web Mesh Processing Help

Layers

- ☒ **gis schools**
- ☐ **fl_volusia_burglary**
 - ☒ 2014
 - ☒ 2015
 - ☒ 2016
 - ☒ 2017
- ☐ **fl_ms_volusia_buildings**
- ☐ **contours**
 - ☒ 5 - 25
 - ☒ 25 - 40
 - ☒ 40 - 55
 - ☒ 55 - 70
 - ☒ 70 - 160
- ☒ **aadt**
 - ☒ 10 - 3500
 - ☒ 3500 - 8500
 - ☒ 8500 - 19800
 - ☒ 19800 - 325000
- ☐ **EvacRoutes**
- ☐ **Strm_SurgeFDEM2017**
 - ☒ 1
 - ☒ 2
 - ☒ 3
 - ☒ 4
 - ☒ 5
- ☐ **QueryLayer_11**
- ☐ **QueryLayer_10**
- ☒ **parcel**
- ☐ **gis_streets**
- ☐ **QueryLayer**
- ☐ **QueryLayer_3**
- ☐ **QueryLayer_2**
- ☐ **QueryLayer_8**
- ☐ **QueryLayer_9**
- ☐ **QueryLayer_7**
- ☐ **QueryLayer_6**
- ☐ **QueryLayer_4**
- ☐ **QueryLayer_5**



Identify Results

Feature	Value
gis_schools	
s_name	SCHOOL BOARD OF VOLUSIA C...
(Derived)	
(Actions)	
parid	5712761
s_name	SCHOOL BOARD OF VOLUSIA C...

