

# California School Campus Database

# **DATABASE MANUAL**

Version 2021

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### California State Parks, Office of Grants and Local Services

For current information about the school boundary project, see californiaschoolcampusdatabase.org

#### **BEFORE USING DATA**, see Data Disclaimer inside

Closed Campus Policy - Any maps depicting CSCD at a county (or more detailed) level, must contain a note informing readers that schools maintain a closed campus policy. For the safety of students, visitors are restricted from entering until receiving official permission from each school to enter a campus. CSCD in no way implies permission to enter any school campus.



CSCD is published by GreenInfo Network

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CSCD has been developed as a response to the need for more accurate information on school locations for a variety of geospatial projects. GreenInfo Network is deeply grateful for the support of the following organizations:

Tobacco-Related Disease Research Program (TRDRP)

National Cancer Institute

Stanford Prevention Research Center

University of California Berkeley, Center for Cities + Schools

California Department of Public Health – California Environmental Health Tracking Program Sacramento, San Diego, San Francisco, San Joaquin and San Mateo counties, all had school information in GIS format

California State Parks, Office of Grants and Local Services

Chan Zuckerberg Initiative

A number of other public agencies contributed data to CSCD. We cannot list them all here, but we are very thankful for their time and assistance.

Current and past GreenInfo Network staff and interns who designed CSCD and created the data contained in it include: Amanda Recinos (project manager), Saba Tekeste Gebreamlak, Kimberly Becerril, Tom Allnutt, Stephanie Ding, Maegan Leslie Torres, Mona Al-Abadi, Jennifer K. Kim, Yessenai Chaiu Zhang, Gina Cova, Laura Daly, Megan Dreger, John Kelly, Larry Orman, Maianna Voge, Jessica Karste.

# **DISCLAIMER**

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This edition of CSCD should be cited in any maps, reports, websites or other products as: California School Campus Database (CSCD) –californiaschoolcampusdatabse.org (Version2018)

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#### **Data Sources**

Data in CSCD is based on a wide range of sources within the budgets available for the data's development and maintenance. The source datasets have a range of publication dates, varying degrees of accuracy, various projections, and different attribute information. GreenInfo Network has made every effort to standardize the multiple data inputs to create CSCD, but occasional errors in this process are to be expected. GreenInfo Network does not provide the original datasets from primary data source providers.

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March 2021

# **KEY STATISTICS**

ver. 2021, March 2021

CSCD contains campus boundaries for 10,076 schools across California for public schools, grades Kindergarten through  $12^{th}$  grade.

- 2,363 are located on a shared campus
- 1,206 are charter schools
- 2 school are operated by the Bureau of Indian Education

<b>Education Level</b>	# of Schools
Elementary	4,988
Intermediate-Middle-Junior High	1,419
High School	1,929
Elementary-High Combination	332
Elementary-Intermediate/Middle/J unior High	1,064
Middle-High School	344

Status	# of Schools
Active	10,060
Pending	16

County	# of School	% of schools
Alameda	387	3.8
Alpine	2	0.0
Amador	16	0.2
Butte	87	0.9
Calaveras	20	0.2
Colusa	22	0.2
Contra Costa	277	2.7
Del Norte	16	0.2
El Dorado	65	0.6
Fresno	341	3.4
Glenn	24	0.2
Humboldt	90	0.9
Imperial	72	0.7
Inyo	21	0.2
Kern	267	2.6
Kings	64	0.6
Lake	36	0.4
Lassen	21	0.2
Los Angeles	2,221	22.0
Madera	80	0.8
Marin	73	0.7

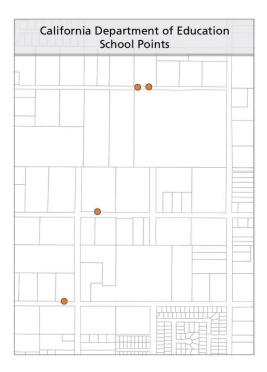
Mariposa	16	0.2
Mendocino	66	0.7
Merced	107	1.1
Modoc	11	0.1
Mono	14	0.1
Monterey	143	1.4
Napa	40	0.4
Nevada	41	0.4
Orange	615	6.1
Placer	116	1.2
Plumas	15	0.1
Riverside	505	5.0
Sacramento	376	3.7
San Benito	27	0.3
San Bernardino	552	5.5
San Diego	747	7.4
San Francisco	129	1.3
San Joaquin	238	2.4
San Luis Obispo	81	0.8
San Mateo	177	1.8
Santa Barbara	118	1.2
Santa Clara	413	4.1
Santa Cruz	77	0.8
Shasta	93	0.9
Sierra	7	0.1
Siskiyou	49	0.5
Solano	104	1.0
Sonoma	173	1.7
Stanislaus	187	1.9
Sutter	42	0.4
Tehama	38	0.4
Trinity	20	0.2
Tulare	195	1.9
Tuolumne	24	0.2
Ventura	211	2.1
Yolo	67	0.7
Yuba	40	0.4

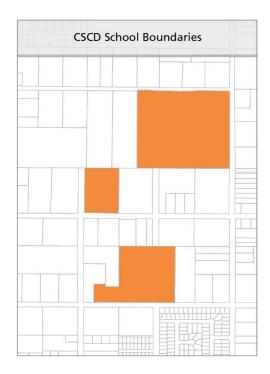
Supplemental data layers included in CSCD provide information on closed schools as well as universities and California community colleges.

- University campus boundaries have been developed for 110 universities. An additional 35 off-campus lands are defined when there is known housing or open space off of the main campus. Universities defined are those believed to have housing for at least 250 students.
- California Community College campus lands were first developed in 2017-18 and are now
  included in the release. The database now includes 144 main campuses and a total of 266
  distinct locations.
- The 2021 release includes a new layer of EducationOwnedLands\_NonPublicK12School covering 2,666 acres. Areas defined in this feature class identify lands owned by a school district but are not known to have an active public K-12 school on them. These may include:
  - Close school site
  - o Private schools, operating on district owned land
  - O Adult, pre-kinder, or other non K-12 schools
  - Bus barns, snow plows/sanders, and other maintenance facilities
  - Administrative and office support building
- Lands previously identified in the Schools\_Former\_Stacked (closed schools) are now identified in as: active schools, or district owned lands without an active/pending school

#### I. INTRODUCTION

The California School Campus Database (CSCD) contains data about properties that are defined as schools and primarily used for educational purposes. School location data has generally been available from the California Department of Education (CDE) only as points, which were overly simplified and often inaccurate. CSCD includes the entire school campus.





### What is included?

- CSCD strives to locate all public schools from elementary through high school (grades K 12)
- Bureau of Indian Affairs schools are included, as possible
- Charter schools and other primary/secondary educational institutions located on rented or leased land or other temporary locations are included, as possible.
- Primary and secondary public schools located on property not owned by the school district are included, as possible. This is most common with charter and/or other non-traditional schools.
- California community colleges and related campuses are included, as of the 2018 release.
- Universities believed to have housing for 250+ students a
- Lands owned by districts/superintendents/offices of education, for uses other than public K-12 education

#### What is not included?

- Private schools are not included given funding limitations, unless they operate on district lands
- Home school locations are not tracked in CSCD for privacy reasons.

• Predominantly virtual/internet schools are not included due to their single point office location not accurately defining where students attend school.

CSCD is suitable for a wide range of planning, assessment, analysis, and display purposes. CSCD should not be used as the basis for official regulatory, legal, or other such governmental actions unless reviewed by the user and deemed appropriate for their use.

The lands in CSCD are generally defined by the parcels owned, rented, leased, or used by a public California school district for the primary purpose of educating youth.

CSCD is published by GreenInfo Network (<u>www.greeninfo.org</u>). Publications are dated: December 2016, December 2018, March 2021. Updates will be published if/when funding is available.

CSCD is available for download, as an ESRI file geodatabase at: <u>californiaschoolcampusdatabase.org</u>. The database contains all known elementary, middle, high, and mixed schools in three feature classes, as described in this manual.

An interactive map of the data can be viewed at: <a href="mapcollaborator.org/mapcollab\_cscd">mapcollab\_cscd</a>

#### II. ABOUT CSCD

CSCD covers the entire extent of California. In most counties, CSCD boundaries are aligned to digital **assessor parcel** boundaries. These boundaries are used to create three levels of CSCD geography: *Schools\_Current\_Stacked, School\_Property,* and *School\_Centroids*. See a further description of each in the section: III. DATABASE STRUCTURE.

#### School areas terms

CSCD defines property as an area that schools use in the education of youth by a public California school district. School campuses are defined by the parcel boundaries available by respective county assessors whenever possible. The following terms are used interchangeably to describe this area: campus, boundary, property, lands, lot, and plot.

#### Access

Closed Campus Policy - Any maps depicting CSCD at a county (or more detailed) level, must contain a note informing readers that schools in California maintain a closed campus policy for the safety of students. Visitors are restricted from entering until receiving official permission from each school to visit or enter a campus. CSCD in no way implies permission to enter any school campus.

#### **Caveats about CSCD**

- When multiple schools are located on one campus, multiple (stacked) polygons are created, one
  polygon per school. Data users must be cautious to avoid double counting school property
  acreage.
- Leased, rented, and contracted lands <u>are</u> considered "school lands" in CSCD. They are not owned by school districts but were being used primarily for public K-12 educational purposes at the time of the data release.
- Charter schools are difficult to define. Often, they occupy only a portion of a parcel or building. CSCD estimates their location given the information available, but charter school data should be used with extreme caution.
- Universities with housing for 250+ students are the only universities included in the University\_lands feature class.
- California community colleges are included in CSCD as of 2018 with a minor update in 2021
- Home and virtual schools are not currently included.
- Private schools are not tracked in CSCD.

## **Unique School Property Features and Types**

- Alternative education centers are generally included
- **Tribal education facilities** listed by the Bureau of Indian Education at <a href="https://www.bie.edu/schools/directory">https://www.bie.edu/schools/directory</a> are included (Two schools in California, as of 2/2021).
- **Portable classrooms** are typically included in a campus boundary. If they are located on an adjacent parcel not owned by a school district, they may not be included. While CSCD attempts to also track leased, rented, or contracted land it is difficult to track short term use agreements.
- Parking lots and bus drop off areas are typically included in school boundaries.
- **Recreation areas** such as gymnasiums, playfields, playgrounds, and open spaces are included in CSCD school boundaries.
- Water such as lakes, reservoirs, or rivers would be included, if they are defined as a part of the assessor parcel owned by the school district.
- **Private schools** are not included in CSCD. Private schools with six or more students are reported by the CDE and listed in the CDE Private School Directory <a href="mailto:cde.ca.gov/ds/si/ps/">cde.ca.gov/ds/si/ps/</a>. They may be included in a future release, if funding is available.
- Service/attendance areas and bus routes are not in CSCD
- **School districts boundary files** are not included in CSCD, though each school lists the district it is a part of in the attribute table.
- Adult schools and Preschools are not included, unless they share a campus with youth facilities
- Joint use agreements are not tracked in CSCD

#### III. DATABASE STRUCTURE

The database contains four feature data sets:

- 1) Higher\_Education
  - a. CA\_Community\_Colleges
  - b. University\_lands
- 2) Primary\_Secondary
  - a. Schools Current Stacked
  - b. School\_Property
  - c. School\_Centroids
- 3) Supplemental
  - a. EducationOwnedLands\_NonPublicK12School

The use of feature datasets and feature classes provide a flexible approach to tracking school property. The data is provided in ESRI file geodatabase file format, as described below:

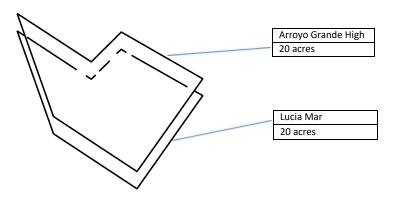
### **CA\_Community\_Colleges (polygon feature class):**

California community colleges are individual polygon representations of campus boundaries for California's post-secondary community college schools. Schools are defined by the parcels owned/used by the college for both the main and branch campus locations. The layer has a type attribute detailing if the polygon is part of the main campus, secondary campus, or off campus property. Off campus lands also indicate if the land is for student housing or is general open space.

# **University\_lands (polygon feature class):**

The layer for universities is a feature class that contains individual polygon representations of campus boundaries (which usually correspond to merged legal assessor or tax parcel boundaries). Only universities known to have housing for over 250 students are included. Schools are defined by the parcels owned/used by the university. The layer has a type attribute detailing if the polygon is part of the main campus, off campus property. Off campus lands also indicate if the land is for student housing or is general open space. Urban universities may be defined as a larger area than the actual campus area given the use of parcel data.

#### **Schools Current Stacked (polygon feature class):**

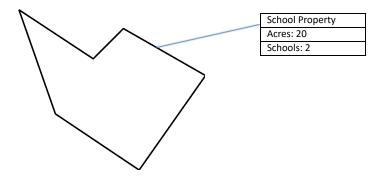


Schools\_Current\_Stacked is a feature class that contains individual polygon representations of school campus boundaries (which usually correspond to merged legal assessor or tax parcel boundaries). Schools are defined by the parcels owned/used by the local school district to conduct regular school activities. The layer also includes lands rented, leased, or formally used by a public school district for primarily educational purposes. This includes: buildings/structures, playgrounds, open space, parking lot(s), portables, and right-of-ways.

Each polygon is coded with the California Department of Education CDS code, allowing for easy joining with CDE attribute information. It is the most comprehensive layer and is appropriate for many analysis functions. However, it must be noted that there are overlapping or stacked polygons. It should not be used for acreage summaries, as it would double count shared campus acres.

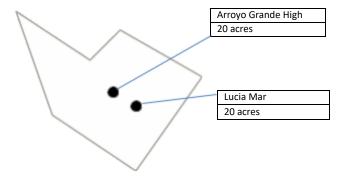
Warning: This layer contains stack (overlapping) school polygons. Multiple schools can be located on a campus with shared use of facilities. CSCD does not attempt to divide the property between multiple schools on one lot. Instead, a stacked polygon approach is used, assigning each school the full campus. In rare instances where a fence or structural boundary made the division clear, a parcel is split.

#### **School Property (polygon feature class):**



School\_Property is a non-stacked version of Schools\_Current\_Stacked and flattens any overlaps present in the schools feature class. This layer should be used for most acreage summaries, some statistics, and cartographic purposes. It contains the number of schools operating on a campus but does not include attributes such as school type and name because one or many schools may be in operation at the location.

#### **School Centroids (point feature class):**



School\_Centroids is a point representation of all schools in the Schools\_Current\_Stacked feature class. Points are generally the true centroid of the campus, as opposed to geocoded points that are more likely to fall near street centerlines. When multiple schools are located at one campus, points are shifted slightly to avoid stacked points. Each point represents one school. Schools with multi-part polygons have had their center point placed within the main campus boundary.

#### EducationOwnedLands\_NonPublicK12School (polygon feature class):

School districts, county offices of education, and superintendents own a variety of lands that are not used for public K-12 education. As possible, we have identified these lands and included them in the District\_nonschool\_lands feature class. This includes, among other:

- Closed school sites (previously Schools\_Former\_Stacked in CSCD releases of 2016 and 2018)
- Bus barns, sander/plow sites
- Maintenance facilities
- Offices for Administration
- Open spaces
- Private schools operating on public district lands

These lands have been added due to the high number of requests about where these lands are located.

#### Potential uses for the data include:

- Disaster response (fire, flood, earthquake, etc)
- Emergency response sites (potential distribution sites, fire staging locations, temporary charging/cooling/housing sites)
- Affordable housing lands
- Shared use agreements (open space and parks)

#### **Parcel Boundary Alignment**

In general, CSCD is intended to be aligned to assessor parcel boundaries. Parcels in most of California are very accurate reflections of land ownership. However, it should be noted, in some rural areas of the state there is differing opinion on the spatial accuracy of these lines. Additionally, if a school is operating on a non-school district owned property, it may be defined at a sub-parcel level if clear information about their area of operation is available.

# **IV. DATA DICTIONARY**

# Schools\_Current\_Stacked, School\_Centroids, and School\_Property

The following is a summary of the attribute fields within CSCD.

The same attribute table structure is used for Schools\_Current and Stacked School\_Centroids:

Field Description	GDB Field Name	Description	Source
School Code	CDSCode	Unique code issued to a school by the California Department of Education. Can be used to join in other attribute information about a school.	
Status	Status	Active, Pending, Merged, Other	
Charter	Charter	Yes, No	
School Type	Ed_Type	Types of traditional and nontraditional education offered, see the appendix for all types. Examples include: Continuation, Special Education, Regional Occupational, Licensed Children's Intuition	California
Instruction Level	Level	Level of instruction offered: Elementary, Intermediate/Middle/Junior High, High School or Combination	Dept. of Education 11/2020
Grades Served	GradesServ ed	Grades served by school. IE: K-12, K-4, 9-Adult	
Grades Offered	GradesOffer ed	Grades offered at the school	
Public, Private, BIE	Pb_Prv_BIE	Public, Private, Bureau of Indian Education (BIE)	
School Name	School	Commonly used school name	
School District	District	Administrating school district	
County	County	County the school is physically located in	
Street	Street	Street address of the school, per CDE	
City	City	City the school is located in, per CDE	
State	State	State the school is located in, per CDE	
Latitude	Lat	Latitude coordinate of the school center point (Y)	
Longitude	Long	Longitude coordinate of the school center point (X)	
Multiple schools	Stacked	Yes, No	
Stacked, # of Schools	Stacked_cnt	Number of schools located at the property/campus	
Data Sources Referenced	Source	Reference data used when creating the boundary. Typically: County Assessor Parcel, Aerial Assessment	GreenInfo
Additional Notes	Notes	Any additional notes used to clarify the specific school or data creation process	Network
Locations	Text	Some schools have multiple campuses that operate as individual schools (multiple principals) but only one CDS code. For multi campus schools with individual operations, they are marked "Multiple campuses, one CDS code". Each of the locations is given a centroid.	

Part Count PartCount	Indicates the number of polygons for each feature. Schools with non-adjacent lands are multipart features.	
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# A limited set of attributes are available for the School\_Property feature class:

Field Description	GDB Field Name	Description
Unique ID	ID	Auto assigned unique identifier
Number of schools on property	School_count	Number of schools operating on the campus, can be one or multiple
Acres of Property	Size_Ac	GIS calculated acres of school campus
Part Count	PartCount	Indicates the number of polygons for each feature. Schools with non-adjacent land are multipart polygons.

# CA\_Community college attributes:

Field Description	GDB Field Name	Description
Name of community college	NAME	Name as commonly reported; typically from the <u>California</u> <u>Community Colleges Registry</u> .
Unique identifier for each campus location	CC_ID	Concatenation of the IPEDSID and an alphabetical letter. This is used so that each school record has a unique identification. The main/initial campus is A, others follow in any order. Any feature class record can be multi-part, if need be.
Integrated Postsecondary Education Data System	IPEDS_ID	A single, comprehensive system designed to encompass all institutions and educational organizations whose primary purpose is to provide postsecondary education and have a Program Participation Agreement with the Office of Postsecondary Education (OPE), U.S. Department of Education (throughout IPEDS referred to as "Title IV") are required to report data using a web-based data collection system. IPEDS currently consists of the following components: Institutional Characteristics (IC); 12-month Enrollment (E12); Completions (C); Admissions (ADM); Student Financial Aid (SFA); Human Resources (HR) composed of Employees by Assigned Position, Fall Staff, and Salaries; Fall Enrollment (EF); Graduation Rates (GR); Outcome Measures (OM); Finance (F); and Academic Libraries (AL).  The IPEDS system is built around a series of interrelated surveys to collect institution-level data, conducted by the NCES. It began in 1986 and involves annual institution-level data collections.
Office of Postsecondary Education Identification	OPE_ID	Assigned by the U.S. Department of Education to identify schools that have Program Participation Agreements (PPA) so that its students are eligible to participate in Federal Student Financial Assistance programs under Title IV regulations.
Community college district name	DISTRICT	Name of the California community college district the school is assigned to.
Campus type	C_TYPE	The type of campus the feature represents:  STUDENT CAMPUS, MAIN - the main (original) campus of the school. Typically the largest (by area and/or student enrollment).  STUDENT CAMPUS - a Center, Branch, or Campus separated from the main campus of the school. They typically have a distinct name, a separate campus maps, web pages, and information.  OFF-CAMPUS PROPERTY - can be any combination of the following:  OPEN SPACE - land owned by the college that is not attached to the main campus and appears to be predominately open and undeveloped land such as reserve, park, agricultural lands.

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		STUDENT HOUSING - Student housing that is not on the main campus or immediately adjacent. Housing on the same parcel of land, or adjacent to the campus with no significant physical barrier (roads not included) it is instead included in the adjacent campus
Street address	STREET	Street address associated with the campus. Large parcels of open space adjacent to a campus are assigned the campus address.
City	CITY	City
Zip code	ZIP	5 digit postal zip code
College website URL	COLLEGE_URL	Main college website - same for all campus, center, branch, locations.
Campus website URL	CAMPUS_URL	Website for specific campus, if available.
Name of K-12 school, if on public school	PUBLIC_K12_USE	If a community college regularly holds classes at a public K-12 school, the school(s) are listed. Some community colleges define the building used and separate features are created.  Example 1 – Cerro Coso Community College, Tehachapi Campus Classes are held at the Tehachapi Education Center at Monroe High School.
		Reported by NCES https://nces.ed.gov/surveys/ruraled/definitions.asp with 2006 definition.  City: Large, Midsize, Small Suburb: Large, Midsize, Small Town: Distant, Remote Rural: Distant, Fringe
Setting of campus	CAMPUS_SETTING	1986 through 2005 used a different classification system: https://nces.ed.gov/surveys/ruraled/priorclassification.asp The campus setting is only defined for the college level record, individual campus, center, branch locations are not classified.
Presence of housing	CAMPUS_HOUSIN G	No - there are no residence hall or housing facilities located on- or off-campus owned or controlled by the institution in support of the institution's educational purposes.  Yes - Presence of any residence hall or housing facility located on-or off-campus that is owned or controlled by an institution and used by the institution in direct support of or in a manner related to, the institution's educational purposes.  The value is reported by NCES at the college level. If a college value is "No" all campus, center, and branch locations are assigned NO. If the college is assigned "Yes" all campus, center, and branch locations are left null unless additional information on which campuses do (or do not) include housing facilities is not readily available.
	NOTES	Specific locational information about the campus, especially if classes are held in a:K-12 school, Military base, Tribal land.  Notes on extensive open space and undeveloped land are also
Location notes	NOTES	included.
Acres of campus	ACRES	Acres, calculated in NAD 1983 CA Teale Albers Projection

# University attributes:

Field Description	Field Name	Description
University	Name	Common name of the university
School code	IPEDSID	Integrated Postsecondary Education Data System

USC and UC	Category	CSU, UC, <null> [make include community college, trade school, etc. as the data set expands]</null>
Data alignment	Source_A	Parcels, Aerial, LA Co. Landuse
Campus	Campus	The location/name of the campus if the university has multiple
Type of use on campus	C_Type	The type of use of the property: Main campus, off campus (housing or open space)
Urban setting	Location	Notes schools in dense urban areas where the boundary may not be the best unit of analysis
Url	URL	Website with additional info about university
Notes	Notes	Information on accuracy, sources, and/or url
Size of campus	Acres	GIS calculated acres of polygon
Funding Type	F_Type	Funding source: Public or Private per nces.ed.gov/ipeds/use-the-data 2/2021

# ${\tt EducationOwnedLands\_NonPublicK12School\ attributes:}$

Field Description	Field Name	Description
Unique ID	LandID	Unique ID for each record
Ownership type	Own_Type	County of Education, District Land, Superintendent Land
Size of land	Size_Ac	Acres of the property, calculated in GIS (unofficial)

# V. CSCD DATA PRODUCTION PROCESS

CSCD makes use of a wide range of data sources, including parcel data from counties, zoning layers, aerial imagery, and other research. In general, the following approach has been taken for developing K-12 campus data:

- 1. ACQUIRE CITY/COUNTY/DISTRICT SOURCE DATA: San Francisco, San Diego, and San Mateo counties have developed a GIS layer of school boundaries. The Los Angeles County land type data was also used for reference. For each of these, the most recent data available is secured and noted in the Source field of the data set.
- 2. RESEARCH ANY CURRENT EFFORTS TO DEFINE SCHOOL BOUNDARIES: Given broad interest in access to geospatial data about school property, each release starts with surveys for any other efforts that may be taking place to define schools. When possible, existing school GIS data is collected.
- **3. UPDATE REFERENCE LAYERS:** Ensure all assessor parcel data, aerial imagery, zoning, and land use data is current.
- **4. CROSS-CHECK DATA RECEIVED AGAINST BASE LAYERS:** A hand review is done for each entry because the existing spatial data on schools obtained is not always consistent with CSCD standards (e.g., parcel aligned, inclusive of adjacent properties regardless of development status, up to date with recently opened schools, closed schools removed). In the review we reference: current CDE status, aerial imagery, zoning, land use, and local assessor parcel boundaries and ownership.

#### 5. CREATE MISSING DATA:

Starting with each county's geocoded point file, review it against the county assessor parcels.

- A. **OBTAIN MOST RECENT SCHOOL LIST:** Download the most recent lists of public schools from the California Department of Education (CDE) <a href="http://www.cde.ca.gov/ds/si/ds/pubschls.asp">http://www.cde.ca.gov/ds/si/ds/pubschls.asp</a>
  Private schools were also downloaded for the appendix <a href="http://www.cde.ca.gov/ds/si/ps/">http://www.cde.ca.gov/ds/si/ps/</a>
- B. **REVIEW AGAINST EXISTING SCHOOL BOUNDARIES:** Flag those that have boundaries from previously gathered sources.
- C. **PLOT NON-PLACED SCHOOLS:** Using the CDE latitude/longitude and street address, geo-locate all undefined schools.
- D. **CREATE CAMPUS BOUNDARIES:** Starting from the point location from CDE, locate what parcels are used primarily for education. Referencing ownership, aerial imagery, zoning, and web research.
- E. **CREATE CENTROIDS:** Using the boundaries defined in D, create true centroids for each school. Note, when school polygons are stacked, points are slightly shifted to avoid overlapping points. Additionally, if the campus is represented by a multi-part polygon the centroid is forced to be within the campus boundary.
- **5. RESOLVING CONFLICTS:** If conflicts exist between sources, assessor parcels are given precedence regarding geometry over other reference layers. When it is not possible to determine if a parcel is

part of a school, often due to lack of ownership information, the best judgment is used by GreenInfo Network staff.

- **6. AERIAL IMAGE CHECKS:** Aerial photography (at 1-meter or better resolution) is used to check boundaries –operator judgment is used to make decisions, though CSCD rarely deviates from assessor boundaries.
- **7. SCALE:** In general, CSCD strives to be accurate to at least 1:50,000 scale, but parcels and air photos may improve accuracy down to 1:24,000 in select parts of the state.

A wide range of data sources are also used for the development of post-secondary education sites (California community colleges and university lands). Higher education lands were developed using a similar workflow. However, because of the complexity of some college locations additional research was necessary. Additional research included:

- A review of each community college website to identify satellite and branch campus locations.
- Searches for online campus maps to inform decision making.
- Classes held regularly at a shared facility (military lands, K-12 schools, and on tribal lands) are much harder to identify. Additional research was done to try and define the buildings, rooms, or sections of land where community college classes are held.

#### VI. KNOWN ISSUES IN CSCD

The first release of CSCD was a significant achievement. In the process of creating California's first database of school campuses we focused on creating a robust and useful database, but issues do remain.

- 1) In most counties, CSCD boundaries are aligned to digital **assessor parcel** boundaries. However, the assessor's roll was not always the source. It should also be noted that rural area assessor boundaries may not be as accurate as urban and suburban regions.
- 2) The school list from the California Department of Education changes frequently. The 2021 release is based on the November 2020 list. CSCD 2016 was based on the school list posted by the CDE on September 10, 2013, it was then updated with the table posted on August 4, 2014 and February 25, 2016 for public schools. It should be noted the CDE data set from August 4, 2014 had reversed the locations of approximately 20 schools, any of the statistics comparing CDE locations from the August 4, 2014 to CSCD will have a higher rate of error as a result. The March 2021 release was based on the November 30, 2020 list.
- 3) Private schools are not included in CSCD, a list is available from the CDE.
- 4) Virtual and internet schools are not fully tracked in CSCD. Primarily online and virtual schools are not included. However, some schools offer virtual and onsite classrooms under one CDS code.
- 5) Home and Hospital schools are not included in CSCD
- 6) As of the December 2018 release California community colleges are now included in the database however, trade, military and vocational schools are not included in higher education. The first release of CSCD (2016) did not include community colleges, trade, technical, military, or vocational schools unless primary education was also taking place on the campus.
- 7) Universities were only included for schools with housing for 250+ students. Housing statistics change annually, some universities may drop out or be added to the database as a result.
- 8) Charter schools are difficult to represent as GIS polygons. Those in urban settings often occupy only a portion of a parcel. For example, they may be located on one floor of a high-rise building, or one building on a multi-building lot. All non-traditional school data should be used with caution.
- 9) When multiple schools are located on one parcel, it is often not possible to define what area of the parcel is used or shared between the schools. CSCD tracks this with stacked polygons, a flattened layer of school property, and school centroids (see section III for more information).

10)	0) Schools operating on rented or leased property may not always occupy the entire parcel. However, CSCD defines the entire parcel as schools, unless information defining its specific location is readily available.				

#### VII. RECOMMENDATIONS AND NEXT STEPS

As with an initial release of a database tracking dynamic data in GIS format, not all issues have been resolved. While CSCD is a noteworthy product, the following recommend updates and enhancements would greatly improve the database:

- 1) Identify boundaries for private school facilities, per the appendix list or the most current CDE private school listing available.
- 2) New schools and school closures are added on a rolling basis. Ideally, the CDE roster would be reviewed on a quarterly basis to identify new and closed schools.
- 3) Add land use types for district owned non-school lands to identify: open space, closed schools, administration offices, transportation related lands (bus barns), maintenance facilities, adult education centers, pre-kinder sites, etc.
- 4) Track the presence of virtual/internet based schools likely best done as a point feature class with summaries of the number of students in each zip code. While zip codes are not idea for spatial analysis, it should be readily available and not compromise personal privacy
- 5) Home school student summaries could be reported though an assessment of feasibility would be needed first. It would also need to be reported at a leave that did not compromise privacy, such as a zip code level summary.

# VIII. CSCD RELEASES, FEEDBACK, AND HISTORY

#### Third CSCD Release (v. 2021)

Published March 2021, this release of CSCD is a major update. Public K-12 schools were updated to reflect new, closed, moved, and changed schools. While attempts were made to identify changes, those schools that changed but were not issued a new CDS code may not have been reviewed. Guidance on when a new CDS code is issued is outlined here: <a href="https://www.cde.ca.gov/ds/si/ds/cdsassignment.asp">www.cde.ca.gov/ds/si/ds/cdsassignment.asp</a>

Feedback from MapCollaborator was also incorporated for primary and secondary education facilities. University and California Community Colleges were updated to reflect known changes, but a full inventory and analysis was not conducted.

Feature Class specific updates:

Public K-12 (School\_Centroids; Schools\_Current\_Stacked):

- Addition of the field Grades Offered `GradesOffered`
- Rename of existing field `Grades` to `GradesServed`

More information on how CDE defines these can be found at: www.cde.ca.gov/ds/si/ds/fspubschls.asp

### University\_Lands:

 Addition of the field `F\_Type` indicating if the school funding is public or private as shown at nces.ed.gov/ipeds/use-the-data

Lands owned by a district, county office of education, or superintendent but not used for public K-12 education at the time of publication are now tracked in the feature class EducationOwnedLands\_NonPublicK12School

#### Feedback

As with any large data gathering program, there are likely to be lands that have been missed, wrongly included, or misattributed. We welcome feedback and corrections, information can be sent to: <a href="mailto:cscd@greeninfo.org">cscd@greeninfo.org</a>. Also, see <a href="mailto:californiaschoolcampusdatabase.org">californiaschoolcampusdatabase.org</a> for more information on how to submit feedback using GreenInfo Network's <a href="mailto:MapCollaborator">MapCollaborator</a> <a href="mailto:application">mapplication</a>.

#### **Brief History of CSCD**

CSCD was developed as the result of a variety of planning efforts and research needing more accurate and complete information on the location of schools in California. While the CDE releases a school list with the school name, CDS code, street address, latitude, and longitude – the information is often inaccurate. Apart from inaccuracies, the data is incomplete for many purposes. Most research and planning projects need the campus footprint, as opposed to a point location.

In 2012 Stanford Prevention Research Center and GreenInfo Network conducted a pilot study. The pilot project included a survey of agencies and organizations to find existing data on school locations, develop best practices for creating boundaries, as well as general research into complex school structures. Additionally, an analysis was done to compare the location of geocoded points, verses actual centroids.

In the fall of 2013 with the funding from the Tobacco-Related Disease Research Program (TRDRP) (PI: Lisa Henriksen, PhD, grant #22RT-0142), the creation of CSCD formally began. Using the most recent school roster at the time (9/10/2013), parcel boundaries, and aerial imagery for each listed school has been reviewed and added to the database. An update of the MapCollaborator has also been conducted to post the most recent school boundaries and include additional layers such as: school district boundaries, zip codes, and parks. On August 5, 2014 and February 25, 2016, CSCD was updated to match the current school list from CDE.

2020 and 2021 funding from the Chan Zuckerberg Initiative and California State Parks, Office of Local Grants and Services, allowed for updates to all existing database layers, as well as the addition on lands owned by districts, county offices of education, superintendent - but not currently used for public K-12 education.

### **CSCD Release History**

**Version 2018** – Published December 2018, was the second release of CSCD. Public K-12 school data is unchanged from the 2016 release. The file geodatabase was released with a new feature class of community colleges. The layer contains 115 California community colleges with 1,019 locations. Core project elements were also updated including the: user manual, data dictionary, and Map Collaborator. The second release of CSCD did not incorporate any changes to primary and secondary education.

**Version 2016** – Published December 2016, it is the first release of CSCD. 2016 includes an initial polygon definition for all public CDE listed schools in California. The data set defines 10,284 schools in 3 feature classes. The release also developed the first user manual, data dictionary, and outlined the data creation methods. A <a href="MapCollaborator">MapCollaborator</a> has been created to allow online access to the data as well as collect feedback and improvements. Future needs and recommended improvements have also been itemized, should funding become available.

# VIIII. Appendix

The following documents can be found online.

California Department of Education:

Public 9/10/13, 8/4/14, 2/25/16, 1/2020 <a href="http://www.cde.ca.gov/ds/si/ds/pubschls.asp">http://www.cde.ca.gov/ds/si/ds/pubschls.asp</a> Private 8/5/14 <a href="http://www.cde.ca.gov/ds/si/ps/">http://www.cde.ca.gov/ds/si/ps/</a>

Bureau of Indian Education:

Bureau of Indian Education National Directory, June 2011 (downloaded 8/5/14, verified 6/22/16 & 2/19/2021) https://www.bie.edu/schools/directory

California Community Colleges Registry:

All Colleges list downloaded 2/2018

http://www.cccregistry.org/jobs/miscelaneous/collegedirectory.aspx

Cross-referenced with 2/2021 listing:

https://www.cccco.edu/Students/Find-a-College/College-Alphabetical-Listing

National Center for Education Statistics – via College Navigator:

Downloaded 2/2018 to obtain IPEDS ID and cross check California Community College Registry <a href="http://nces.ed.gov/collegenavigator/default.aspx?s=CA&ct=1&ic=2&xp=1">http://nces.ed.gov/collegenavigator/default.aspx?s=CA&ct=1&ic=2&xp=1</a>

### University lands:

Degree granting institutions (filtered by secor and dorm capacity as of 2019) http://nces.ed.gov/ipeds/datacenter/InstitutionByName.aspx?goToReportId=5