

## California Conservation Easement Database (CCED)

Notice for Database Manual

# Before You Use CCED Data . . .

*Your use of CCED data signifies that you will abide by the guidelines below and in the Disclaimer that follows.*

CCED contains GIS data for conservation easements over public and private property. While this data is from public records, **your use of the data should make every effort to respect the privacy concerns** and sensitivities of land owners and those agencies and organizations who work with them.

1. Any maps of CCED data should show clearly that easement properties are closed to any public access, unless CCED has specific information to the contrary. Very few easements allow public access.
2. Private land owner names are typically not included in CCED and should not be attached to CCED data shown on maps. When labeling easement properties, users should access the generic holding name field [ease\_label], use “restricted lands”, or use an equivalent general title whenever feasible.
3. Likewise, avoid showing on maps the individual agencies or organizations who hold easements, unless essential to your task. Instead, consider using the agency level field [eholdtyp] classifying the agency as: federal, state, local, or nonprofit, to indicate the type of easement holder.
4. If specific easement boundaries are not needed for map display, use center point symbols or other forms of abstraction.
5. CCED is provided as is, without any warranty of accuracy. CCED boundaries are as provided by various sources and have not been enhanced to align with parcels or other GIS data. Where CCED is missing data, please contact us at [cced@calands.org](mailto:cced@calands.org) to let us know about these gaps.

CCED is suitable for a wide range of planning, assessment, analysis, and display purposes. CCED should not be used as the basis for official regulatory, legal or other such governmental actions – these types of uses require official land records from county recorders or easement holding agencies in the area of focus.

Thank you for your consideration and cooperation in using and improving CCED.

GreenInfo Network  
November 2019

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# California Conservation Easement Database (CCED) - Version 2019

## CCED DATABASE MANUAL

Revised: November 2019

**BEFORE USING DATA, see Data Disclaimer inside and note that:**

- Easement lands are most frequently private property - maps must clearly show them with no public access
- CCED is not suitable for property survey or other legally-binding functions – see source agency data or County Recorder records for such information
- CCED data may not be the most current data for any specific agency or organization, as it is updated less frequently
- Display on maps of easement holder agency/organization names and actual property names should be avoided whenever feasible, in favor of more generic titles

*For more information on CCED, go to: [www.CALands.org/cced](http://www.CALands.org/cced)*

CCED is published by GreenInfo Network  
[www.greeninfo.org](http://www.greeninfo.org)



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For more information on CCED and CPAD (data on fee owned protected areas), visit [www.CALands.org](http://www.CALands.org)

# Disclaimer

## Summary

The California Conservation Easement Database (“CCED”) has been developed by GreenInfo Network for general use in land use planning, education or other activities that do not rely upon the data for a legally binding decision. While GreenInfo Network strives to provide the best data possible, GREENINFO NETWORK MAKES NO REPRESENTATION OR WARRANTY AS TO ITS ACCURACY, TIMELINESS, OR COMPLETENESS. GREENINFO NETWORK MAKES NO WARRANTY OF MERCHANTABILITY OR WARRANTY FOR FITNESS OF USE FOR A PARTICULAR PURPOSE, EXPRESSED OR IMPLIED, WITH RESPECT TO THESE PRODUCTS OR THE UNDERLYING DATA. Any user of this data, accepts same AS IS, WITH ALL FAULTS, and assumes all responsibility for the use thereof, and further covenants and agrees to defend, indemnify, and hold GreenInfo Network harmless from and against all damage, loss, or liability arising from any use of this product, in consideration of GreenInfo Network having made this information available.

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This edition of CCED should be cited in any maps, reports, websites or other products as: “California Conservation Easement Database (CCED) – [www.CALands.org](http://www.CALands.org) (November 2019)”

## 1. Disclaimer Details

This digital data and metadata, (hereinafter collectively referred to as the "information"), are provided on an "AS IS", "AS AVAILABLE" and "WITH ALL FAULTS" basis. Neither GreenInfo Network nor any of its employees makes any warranty of any kind for this information, express or implied, including but not limited to any warranties of merchantability or fitness for a particular purpose, nor shall the distribution of this information constitute any warranty.

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## Uses

CCED is made available without charge for a wide range of uses, for example, use by government agencies in planning and operations, use by private consultants in the development of plans and

analyses, use by non-profit organizations and educational institutions for strategy, research, planning, management and other functions. While agencies, organizations, individuals and businesses may distribute free of any charges copies of the data, any such replication must include this disclaimer and require user to review the provisions therein.

CCED may be used on computer data networks, but should not be published for public website maps that allow users to view the data at a scale of 1:100,000 or larger.

See the attached document, "Before You Use CCED Data" for further use guidelines.

### **Data Sources**

Data in the CCED 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. Over time, and as funding allows, some CCED boundaries will be aligned to ownership parcel boundaries, but that independent alignment work has not been conducted for this edition. GreenInfo Network has made every effort to standardize the multiple data inputs to create CCED, but occasional errors in this process are to be expected. GreenInfo Network does not provide the original datasets from primary data source providers.

### **Limitation of Liability**

IN NO EVENT WILL GREENINFO NETWORK BE LIABLE TO YOU OR ANY THIRD PARTY FOR ANY DAMAGES ARISING OUT OF THE USE OF OR INABILITY TO USE THE DIGITAL DATA, EVEN IF GREENINFO NETWORK IS ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

November 2019

## Summary

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**IMPORTANT:** Easements are special types of protected areas, where the land can remain in private ownership. Consequently, anyone using California Conservation Easement Database (CCED) data shall follow these overall guidelines:

1. Any maps of CCED data should show clearly that easement properties are **closed to any public access**, unless CCED has specific information to the contrary (very few easements allow public access).
2. Private land owner names are typically not included in CCED and **should not be attached** to CCED data shown on maps. When labeling easement properties, users should access the generic holding name field [ease\_label] or use “restricted lands” or equivalent general title whenever feasible.
3. Likewise, showing on public maps the individual agencies or organizations who hold easements should **be avoided** whenever feasible. Instead, consider using the agency level field [eholdtyp] classifying the agency as: federal, state, local, or nonprofit, to indicate the type of easement holder.

CCED contains data about lands that are under conservation or open space easement (as opposed to those in CPAD that are owned outright “in fee”). Easements lands are typically private property and are only rarely open to the public. While some easements overlay publicly-owned lands, it is uncommon.

CCED easement lands range from the very small parcels in cities to large rural or wild landscapes. Uses on these parcels may include farming, ranching, timber harvesting or open space (including use as floodways, scenic viewsheds or for the protection of biodiversity). Easement protected lands are sometimes parts of larger protected landscapes and sometimes they exist on their own. It is important to note that one privately owned property may have two or more easements held by agencies or nonprofits (“stacked” easements) – this can affect statistical counts of easement acres.

This edition of CCED inventories over 2 million acres in about 12,250 easements, held by over 220 agencies and nonprofits. CCED is published by GreenInfo Network ([www.greeninfo.org](http://www.greeninfo.org)). Access to CCED data files is available online - see [www.CALands.org](http://www.CALands.org) for more information. CCED is available in ESRI shape file format. Related data sets are available at [www.CALands.org](http://www.CALands.org) for fee-owned protected areas (CPAD), as well as military and tribal lands.

The current release is CCED 2019, published in November 2019. This is the fifth official release of the CCED data set.

NOTE: CCED is regularly submitted to the National Conservation Easement Database (NCED – <http://conservationeasement.us>) and is expected to become a part of their next release, though minor differences may be present.

## CCED 2019 – Key Statistics

November 2019

IMPORTANT: The CCED dataset still contains some overlapping “stacked” polygons (see Section III., Database Structure below). The stacked polygons represent lands under easements held by more than one agency, multiple funding sources, transaction dates, or other unique situations. We continue to resolve these duplicate polygons however some overlaps remain until we are able to verify further details about the easement. Additionally, some easements exist on land that is also in fee ownership, and will overlap wholly or partly with land identified in CPAD, the California Protected Areas Database.

CCED statistics are provided statewide and for the top 10 easement holding agencies. This reflects the amount of acreage estimated to be on the ground. Statistics by managing agency and agency level assign acres only to the primary easement holding agency or organization. When multiple agencies hold and easement over the same land, the most local agency is assigned as the primary easement holder.

- Total acres statewide in California = 2,128,000<sup>1</sup>
- Count of easement polygons = 12,200<sup>1</sup>
- The largest easement in CCED is the 82,053 acres
- The smallest is less than 1 acre
- The average easement size is 174 acres
- The median easement size is 3 acres

<sup>1</sup>Acres are estimated given data constraints. The CCED database contains 2,131,685 acres and 12,256 records. Overlaps are still present in CCED, there are thought to be 100 overlapping polygons covering just over 4,000 acre.

Top 10 easement holding organizations:

The Nature Conservancy	334,971
California Rangeland Trust*	192,632
California Department of Fish and Wildlife	166,579
United States Fish and Wildlife Service	156,849
United States Natural Resources Conservation Service	134,062
Sonoma County Agricultural Preservation and Open Space District	113,906
Tejon Ranch Conservancy	108,900
Pacific Forest Trust	88,512
Marin Agricultural Land Trust	54,066
Wildlife Heritage Foundation	54,127

\*California Rangeland Trust (CRT) easements are not completely represented in CCED as CRT has not made this information available. The [California Rangeland Trust website](#) reports that they have “helped permanently protect 330,383 acres of privately-owned rangeland.” It is unknown if the full 330,383 acres are easements held by CRT. The 2015 [Land Trust Alliance census](#) reported CRT held 287,000 acres.

## I. Introduction

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The California Conservation Easement Database (CCED) inventories lands that have been protected through conservation or open space easements. A separate database (CPAD – the California Protected Areas Database) tracks open lands owned outright (“in fee”).

Conservation easements are legal restrictions created by a contract between a land owner and a qualified agency or organization that are usually based on limiting the future uses of a property to those compatible with open space, conservation, farming or other defined uses. Such easements reduce or remove development opportunities on these lands. All easements in California are officially filed with the relevant County Recorder’s office (not necessarily the Assessor’s office) and are public records data. Some easements are acquired with public funding; others are created by landowner donations, and many by a combination of the two. Where public funding is involved, public records describing and mapping the property and presenting its appraisal are created.

CCED is focused on lands conserved for natural or other open space purposes and does not include all easements. For example, it does not include utility easements or easements created for short terms (10 or fewer years).

CCED is suitable for a wide range of planning, assessment, analysis, and display purposes. CCED should not be used as the basis for official regulatory, legal or other such governmental actions – these types of uses require official land records from county recorders or easement holding agencies in the area of focus.

The lands in CCED are typically defined by the agency or organization who manages the site, and information on the private land owner is only reported if readily available in public records and/or reported to CCED. Some easement holders do indicate owner name in property titles (e.g., “Jones Ranch easement”) and this source information is transferred into CCED.

Access to CCED GIS data is through the via a download link, see more information at [www.CALands.org/cced](http://www.CALands.org/cced). CCED is available in ESRI shape file format.

CCED has been developed by GreenInfo Network, a non-profit technology support organization [www.greeninfo.org](http://www.greeninfo.org), with support from other non-profits, foundations and public agencies. Previous supporters of CPAD and CCED have included: California Department of Parks and Recreation, Sierra Nevada Conservancy, and the Coastal Conservancy. From 2012 to 2014, CCED development was supported by a grant from the California Strategic Growth Council through the U.S. Geological Survey’s Gap Analysis Program (GAP). Current funding, from 2018 to 2020, is generously provided by the California Natural Resources Agency – we greatly appreciate this assistance.

NOTE ABOUT EASEMENTS ACROSS THE US: A national inventory (the National Conservation Easement Database, or NCED) is available to track easements. Access to this national data set is presently available through: <http://nced.conservationregistry.org/> CCED is integrated into NCED, though minor differences are present.

## II. Data Definitions

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### CCED Geography

CCED covers the entire state of California. Easements boundaries are most frequently identified by the managing agency. Given their unique status, these boundaries may not align precisely to digital assessor parcel boundaries. Future releases will explore options for improving alignment (see “VI. Known Issues in CCED” below for further discussion).

### Conservation Easement Status and Purposes

Lands in CCED have been identified as those with legal conservation or open space easements, typically serving one or more of the following open space purposes:

- Habitat Conservation - wildlife or plant reserve protected specifically for habitat
- General Open Space – open land used serving a broad range of purposes
- Historical/Cultural - historic sites
- Forestry - active forest harvesting, tree growth for forestry
- Agriculture - crop lands including irrigated pastures
- Ranching - grazing lands – grasslands, mixed forest, dry and grazing pasture
- Water Supply - watersheds, waterways
- Scenic area – viewscapes, etc.
- Flood Control – flood plains, natural flood control channels

### Easement Definition within a Parcel

Conservation easements can be placed on part of a parcel, or the entire parcel. Existing buildings, hardscape areas, and ancillary structures may be present on the parcel. The data in this release has not been reviewed in great detail to include or exclude portions of parcels that may not be a part of an easement. **Users should therefore exercise caution when using the data and should refer to county recorder property records and/or the easement holding agency/organization for most current and accurate information.**

### Ownership vs. Management

CCED tracks lands according to the agency that manages the easement over the property. Information on the owner of the land is not included, nor is it planned to be included in future releases.

## No Public Access

Almost all lands in CCED should be considered *Closed* and not open to the public. **Any maps including easement lands must clearly and prominently indicate that these lands are *Closed* areas – and any map of recreational or other public access sites/opportunities must not include easement lands. Where easement properties are known to allow managed public use, these opportunities may be shown, but only where they are validated with the easement holder.**

## Parcel Boundaries

While CPAD has generally been aligned to assessor parcel boundaries, most CCED data is not. In many cases easement boundaries from source agencies have been digitized independently of assessor parcel data – sometimes due to accuracy issues in the assessor data, sometimes because assessor data may not have been available when easement data was created. In addition, assessor parcels in rural areas are not always highly accurate spatially.

Easements may also vary in their coverage of a parcel. Some easements cover an entire parcel; others only define a portion of the parcel as an easement. An assessment of the alignment of easement edges with CPAD lands shows it would require substantial work. Should funding be available, it will be addressed in future releases.

### III. Database Structure

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The CCED easement database is a single ESRI formatted shapefile containing polygons. The current CCED data set contains a mix of geographic levels. Some easements are defined by individual parcels (or pieces of parcels), while others are dissolved groupings of parcels. Future releases of CCED will explore the possible use of a holdings/units structure, as is implemented in CPAD, where parcels aggregate to commonly named units in order to provide consistent definitions of parcels and aggregated easements held by the same land owner and managing agency.

It should be noted that the source data sets used to create CCED often identify easements in different manners. In particular, the overlap of easements when there are multiple easement holders and/or funding sources is not consistent. CCED makes incremental attempts to standardize the data from disparate sources, but additional work will be needed in future releases to standardize the data. For this reason, users should exercise caution when reporting acreage statistics that may contain stacked polygons.

The 2019 release of CCED marked a significant improvement in resolving stacked easements. Records were reviewed to identify easements with similar geography and attributes. When an easement was verified to cover the same land, with only minor edge differences (less than an acre and/or less than 10% of the total easement area), stacked polygons were resolved.

Stacked polygons were resolved by:

- Selecting the most accurate polygon feature
- Assigning the most local agency as the primary easement holder
- Listing all other easement holders in the secondary easement holder field
- Providing any necessary data notes in the comments field

Scenarios we were not able to resolve were those that:

- Easement attributes varied significantly (name, reported size, access)
- Easement geometry varied significantly (shape or size)
- California Department of Fish & Wildlife (CDFW) was an easement holder<sup>1</sup>

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<sup>1</sup> CCED has agreed to include CDFW lands provided without alteration

## IV. CCED Data Dictionary

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The core fields of CCED match NCED. This allows for the California data to efficiently transfer into the national data set. It should be noted that all NCED fields are maintained in CCED, though not all NCED fields are included in the CCED release. As future funding allows for additional resources to fully attribute easements, additional fields may be included in CCED releases. The table below is a brief listing of the fields released in CCED, see the GIS metadata for a full detailing of: field alias, data type, length, and source.

Field Name	Description
<b>ease_label</b>	Conservation Easement (text, for use in most mapping displays, rather than site name)
<b>sitename</b>	Site name, as reported by source data
<b>esmithdr</b>	Primary easement holder name
<b>year_est</b>	Year easement began (yyyy)
<b>nced_uid</b>	NCED identifier (mostly unique)
<b>eholdtyp</b>	Easement holder level: federal, state, local, NGO, or other legal classification
<b>pubaccess</b>	Identifies if an easement is: closed, restricted, or open (assume closed)
<b>duration</b>	Identifies whether the easement is permanent or term-limited
<b>term</b>	Numeric field noting the term of the easement
<b>dataentry</b>	Date when record entered by operator
<b>comments</b>	Any comments from either the source, provider, or aggregator
<b>projectid</b>	WCB unique identifier
<b>dtmboardap</b>	Date of easement project approval (often a board meeting decision)
<b>county</b>	County holding is within
<b>src_align</b>	Source of the easement spatial geometry
<b>src_attr</b>	Source of the easement table attribute data
<b>cced_id</b>	CCED identifier (mostly unique)
<b>gis_acres</b>	Easement acres, as calculated in GIS
<b>e_type<sup>1</sup></b>	Placeholder for ongoing testing to add easement type. Future values may include: Agricultural, Conservation, Open Space, Protective, Recreation, Scenic, Trail

<sup>1</sup> Fields not included in NCED, but created for CCED

## V. CCED Data Procedures

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CCED makes use of a wide range of data sources, including source agency databases, parcel data from counties, and other research. In general, the following approach has been taken:

- 1. AGENCY SOURCE DATA:** Source agency GIS data is secured for agencies, where it is available. With hundreds of agencies and organizations having holdings in CCED, contact with each of these is not possible. However, the top 20 agencies/organizations are believed to hold over 90 percent of the easements in CCED and many have GIS data. Additionally, some easements are defined by public data sets covering county or statewide inventories (eg, that of the Wildlife Conservation Board - WCB). Not all agencies have contributed data to CCED. When possible, additional research is done to define very large known easements through available public information sources.
- 2. PARCELS AS GEOMETRIC BASE:** CCED is evaluated in the context of assessor parcels and, to some extent, the Public Land Survey System (PLSS) but is not aligned to this base data. The information gathered will be used in future releases to guide a refined geometry of easements. Easements do not always cover entire parcels, as they may exclude existing structures and development.
- 3. CROSS-CHECK WITH CPAD:** CCED is spatially reviewed in context with CPAD to try and evaluate easement boundaries, future efforts will be required to resolve edge matching. Both gaps and silvers occur when using CCED in conjunction with CPAD and other GIS layers.
- 4. RESOLVING CONFLICTS:** Agency source data is generally considered to be authoritative in CCED. When an easement is defined in multiple contributing data sources, data contributed directly from the agency managing the easement is assumed to be authoritative over compiled data sets such as WCB. Given the unique scenario of easements, additional in-depth research is often required by data users to accurately define the easement boundaries.
- 5. AERIAL IMAGE CHECKS:** As possible, 1-meter or better aerial photography is used to verify the location of an easement. Future efforts may be taken to check boundaries against physical features such as fence lines, roads, waterways, and physical structures. However, parcel boundaries are accepted even if they do not perfectly align to such aerial images.
- 6. COUNTY BREAKS:** Easements that span a county boundary are not split. They are assigned to the county they have the most acreage in.
- 7. SCALE:** The scale of accuracy is highly varied across the state. In general, the data is best used at scales above 1:24,000.

## VI. Known Issues In CCED

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CCED is a developing data set and contains a number of unresolved issues.

### Main issues:

- 1) Not all agency/organization easement data is in CCED. CCED is heavily focused on easements that are already defined by the managing agency in GIS format. Many smaller easements are not included, as it is difficult to survey all possible easement holders across the state. Efforts are under way to encourage all easement-holding agencies/organizations to participate in CCED. In particular, many city and county easements are not yet included.
- 2) Alignment of easements varies greatly - some match parcel boundaries, some use physical features of the landscape or manmade features, others are loosely defined with no obvious reason for the boundary definition. CCED currently accepts any agency/organization submitted boundary as the most accurate. Future release will attempt to improve the alignment and accuracy of easement boundaries.
- 3) Slivers will exist when using CCED in coordination with other layers such as CPAD.
- 4) Complete attributes are not always available for all easements; these are blank until further information is found.
- 5) Easements have not been attributed as being on land or water, future releases may include tracking of tidal or submerged lands.
- 6) Agencies may track multiple easement holders on one property differently. Stacked polygons are used to indicate multiple easement holders with significant differences in the geometry and/or attributes. For this reason, CCED users must use caution when reporting any acreage or number easements statistics. CCED 2018 removed many duplicate easements in previous release, and 2019 made significant improvements in overlapping sliver areas, but not all easements have not been comprehensively resolved.

## VII. CCED Releases and History

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### Current Release - CCED 2019 (November, 2019)

This is the fifth official release of CCED and it builds on the previously distributed inventory of conservation easements across California.

Notable aspects of the work in this release:

- Over 50,00 easement acres have been added
- Topological errors have been reviewed resulting in the removal of over 10,000 acres from previously overlapping polygon edges

As with any large data gathering program, there are likely to be lands that have been missed, wrongly included, or miss-attributed. If you find errors, please contact GreenInfo Network at [cced@CALands.org](mailto:cced@CALands.org). Not all inquiries can be responded to given funding constraints. However, issues and errors are logged for future research if/when funding is available.

### Brief History of CCED

CCED was developed during 2013-2014 and first published in March 2014. The dataset was created in response to direction from the California Strategic Growth Council (SGC), which is overseeing a wide range of planning related efforts for the state. The data has been prepared in response to frequent requests by local, state and federal agencies and nonprofits for a more complete representation of California's protected landscape. Easements are a vital part of protected California's natural resources. As such, it is important to know their location, size and how they relate to whole host of other features (soil types, watersheds, flood control, habitat, etc.).

Initial efforts to track easements go back as far as the initial work on CPAD in the 1980s, mostly focused in the San Francisco Bay Area. However, funding has only now become available to try and standardize and improve information about easements. Previously, when data on a conservation easement was received it was filed in a digital collection of folders and files. It was not integrate with other data on easements, reviewed for accuracy, or researched for important attributes.

In the early 2000s, the State of California developed an initial statewide coverage of protected lands known as the Public and Conservation Trust Lands (PCTL) database. This data included mainly state and federal lands owned in fee, but it did include some conservation easements. It did not include: regional

lands, local lands, non-profit lands – for both fee and easements. It was last updated in 2005 and is now a legacy data set, replaced by CPAD and CCED.

From the early 2000s to 2006 GreenInfo Network received funding from a variety of sources to advance the CPAD content, structure and distribution. However, easement data did not receive funding and remained stagnant until 2012. In late 2012, GreenInfo Network began a major project to improve CPAD and create CCED, supported by a grant from the California Strategic Growth Council in collaboration with the USGS Gap Analysis Program. See details on [www.CALands.org](http://www.CALands.org).

In 2015, GreenInfo received funding from the California Natural Resources Agency for two years of support for CPAD and CCED. In 2018 GreenInfo received additional funding from the California Natural Resources Agency.

## **CCED Release History**

**CCED 2019** (Published November 2019) – The current version of CCED focuses on the addition of new lands as well as resolving topological errors, most notable data slivers resulting in overlaps.

**CCED 2018** (Published December 2018) – The fourth version of CCED is an important release, which focused on adding new lands that totaled over 500,000 acres.

**CCED 2016** (Published December 2016) – The major release included the addition of hundreds of new agencies and over half a million new acres. Many duplicate easements were resolved and fields were improved to facilitate better syncing with the national NCED database.

**CCED 2015a** (Published April 2015) – The second release of CCED was a minor release. It included the addition of 37 easements and covers 71,898 new acres. Data formats were changed, for three fields, to match NCED.

**CCED 2014a** (Published March 2014) – The first release of CCED, it included conservation easements held by 93 agencies/organizations covering 1.5 million acres. Initial attempts were made to standardize the data attributes, assess edge alignment, and compile spatial data from all contributing groups. The release also defined the database structure, documented known issues, provided a detailed user manual, and outlined a use agreement and data usage policy for CCED.