

Secretary of State Alex Padilla

Election Night Data-Feed Guide

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Document History

Version	Date	Author	Description
1.00	12/20/2007	SOS ITD	Initial Release
1.10	04/08/2008	SOS ITD	Update for 2008 Statewide Direct Primary Election
1.11	07/27/2008	SOS ITD	Update for 2008 General Election
2.00	03/16/2009	SOS ITD	Update for 2009 Statewide Special Election
2.01	04/10/2009	SOS ITD	Added the 'update' report type.
3.00	03/23/2010	SOS ITD	Update for 2010 Statewide Direct Primary, revised record layout for report date in V Message file and XML 530 file.
4.00	09/13/2010	SOS ITD	Update for 2010 General Election, revised record layout for candidate name in C Message file and XML 510 file.
5.00	3/16/2012	SOS ITD	Update for 2012 Presidential Primary election. Added Section 1.2 Data File Changes.
6.00	09/10/2012	SOS ITD	Update for 2012 General Election
7.00	04/09/2014	SOS ITD	Updated for 2014 Primary Election. Split the document into separate files. Added support for EML v7.0-cs1
8.00	03/01/2016	SOS ITD	Updated for 2016 Presidential Primary Election. Dropped support for EML 5.0.
9.00	03/01/2018	SOS ITD	Updated for 2018 Statewide Direct Primary Election.
10.00	09/04/2018	SOS ITD	Update for 2018 General Election, added JSON

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1. Introduction

- Each election night, the Secretary of State's office provides live election results in data files to media clients who have signed up with the Secretary of State's office. The data files are provided for media clients to use and process by an external system. This Election Night Data-Feed Guide is intended to give the media client a perspective of the file formats offered and to provide detailed information for both file formats.

For additional information and sample files, go to <https://www.sos.ca.gov/media/>.

1.1. File formats

Each election cycle, the Secretary of State's office releases files in several formats. Our current file sets are:

- ASCII data format – a domain specific pipe delimited format.
- XML Version 7.0-cs01 format – an XML format, designed to be compliant with the EML 7.0-cs01 committee specification.
- JSON – JavaScript Object Notation is a lightweight data-interchange format. It is easy for humans to read and write and easy for machines to parse and generate.

1.2. File Retrieval

Media clients have access to the data-feed files via a website provisioned only for media clients on Election Night. This access method is simple and usually easy to integrate into external processes. Media clients will receive unique URL information for retrieving election night data files after signing up with the Secretary of State's office.

The November election will include one file containing election results for U.S. Senate, Governor, Lieutenant Governor, Secretary of State, Controller, Treasurer, Attorney General, Insurance Commissioner, Board of Equalization (4 districts), State Superintendent of Public Instruction, U.S. House of Representatives (53 districts), State Senate (20 districts, even-numbered), State Assembly (80 districts), Justices of the California Supreme Court, and Justices of the California Courts of Appeal, and eleven state ballot measures.

Note: Support for FTP was dropped after the November 2014 General Election.

2. General Information

2.1. *Contact Information*

Please direct all technical questions and comments to the SOS ITD Help Desk at (916) 653-8905.

2.2. *Pre-Election Night Data Files*

The pre-election night data files are files that media clients may use to build an external system.

In the ASCII file format, each set of the pre-election night data files contains the five files listed below:

- Candidate Information (C message file)
- Precinct Numbers by County (P message file)
- Contest Codes and Descriptions (R message file)
- County Codes and County Names (S message file)
- Voting Results and County Reporting Status (V message file). This file will show zero votes cast for all candidates.

In the XML File format, each set of the pre-election night data files contains the following files:

- An EML 510 file for all results. This can be a very large file.
- An EML 510 file for each statewide race.
- An EML 530 file for County Reporting Status data.

2.3. *Election Night Data Files*

The election night data files are created approximately every five minutes after the polls close at 8:00 p.m. Pacific Time on Election Day. There may be longer periods of time during which some counties show no updates because each of the 58 county elections offices processes ballots differently. County elections officials are required to send initial results to the Secretary of State's office no more than two hours after they begin tallying the votes (no later than 10:00 p.m.). Data files will be generated until all counties have reported final numbers for the semi-official canvass.

2.3.1. ASCII Files

The election night data file for ASCII feeds is the V message file. This file contains both the V message records and the A message records which are the Voting Results and County Reporting Status respectively.

For complete details and a technical description of the V message file, please see the ASCII File Format document at www.sos.ca.gov/media/.

2.3.2. XML Files

For the election night data feed, the Secretary of State has adopted EML version 7.0-cs01 as the standard.

The EML containing the election night data is comprised of several file types. The 510 file type includes a file with *every* statewide contest and individual files for *each* statewide contest. Additionally, the 530 file type has one file that contains the County Reporting Status data.

For complete details and a technical description of the EML version 7.0-cs01 files, see the XML File Format – EML 7.0-cs01 document at <https://www.sos.ca.gov/media/>.

Note: The XML data format will be not be offered after the November 6, 2018, General Election.

2.3.3. JSON API

For the election night data feed, the Secretary of State now offers a JSON REST API v1 option.

For complete details and a technical description see <https://media.sos.ca.gov/json/>.

Please direct all technical questions and comments to the SOS ITD Help Desk at (916) 653-8905.

2.3.3.1. Endpoints

Allowed requests: GET to the endpoint.

Some examples include:

URL Endpoint	Data Returned
https://api.sos.ca.gov/returns/governor	Returns statewide election results for the governor's race.
https://api.sos.ca.gov/returns/governor/county/lake	Returns only Lake county election results for the governor's race.
https://api.sos.ca.gov/returns/ballot-measures	Returns statewide election results for all ballot measures (propositions.)

For a complete list of endpoints, please refer to the **API Endpoints** document at <https://www.sos.ca.gov/media/>.

2.3.3.2. HTTP Verbs

Only **GET** commands are available through the public API.

2.3.3.3. Schema

All API access is over HTTPS and available at <https://api.sos.ca.gov>. By default, the data is sent and received as JSON.

As an optional parameter, use **?f=csv** to output CSV formatted data.

2.3.3.4. Authentication

Authentication is not required for public access to the Election Night Reporting REST API v1. Private access is not provided to any data at this time. Requests requiring authentication may return "404 Not Found" instead of "403 Forbidden". This is to prevent accidental leakage of data to unauthorized users.

3. Testing

The Secretary of State's office is committed to integrated system testing. To achieve that goal, the Secretary of State's office performs several iterations of testing in the weeks leading up to the election for both internal and data-feed media clients. The system tests simulate election night by generating test data. The Secretary of State's office encourages counties and data-feed media clients to participate in the system tests.

For a specific schedule of testing opportunities, see the **Testing Schedule** document at <https://www.sos.ca.gov/media/>.