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Statewide Voter Registration Database (SWVRD) System Manual

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# TABLE OF CONTENTS

I. Glossary of Terms  
Voter File Layout & Field Names  
II. Introduction  
III. Statewide Voter Registration Database  
1. Security of Voter Information  
2. Passwords, Login/Logout, Open Connections  
3. Controlled Access Area  
4. Synchronization  
5. Frequency of Updates with the Secretary of State  
6. Data Cleanup  
7. Assigning Precinct Codes  
IV. Records  
8. Record Maintenance  
9. Record Retention  
V. Administrative Procedures  
10. Removing Voters from Lists  
11. Data Format Rules  
12. Political Regions  
12.1. Defining County Regions  
12.2. Statewide Political Regions  
13. Legal Lists  
13.1. Legal List Changes  
14. Edit Checks  
14.1. Invalid Name Sent to SOS  
14.2. Valid Name Sent to SOS  
15. Response Time Requirements  
15.1. Resolving Duplicates  
15.2. XML Error Correction  
15.3. Packet Resend Times (For Technical/Vendor Staff)  
15.4. BMV Not Confirmed (this process is currently turned off)  
15.5. BOE VRS Registration Location Statistics  
15.6. Voting History Upload  
15.7. General Responsiveness  
16. Audit Checks  
16.1. Frequency of Checking  
16.2. Resolving Audit Issues  
16.3. Manual Audits  
17. BMV Not Confirmed Results in Second Voter ID  
18. Initialization  
Step 1 – Manual Connectivity Check with SOS  
Step 2 – Provide SOS with Voter Count  
Step 3 – Exchange of Connectivity Information with the SOS
Step 4 – Create Local Political Districts 20
Step 5 – Send Voters 20
Step 6 – Confirm SOS Sync - Respond to SOS Audit Requests 20
Step 7 – Adding Missing Voters during Initialization 20
Step 8 – Decision to Move Board VRS to ACTIVE status 21
Step 9 – Normal operations begin 21
19. Election Request/Voting History 21
20. Location Statistics 21
   Step 1 – SOS Requests Location Statistics 22
   Step 2 – Board VRS Provides Location Statistics 22
21. Communication Issues 22
   21.1. Heart-beat Hold 22
   21.2. Unresponsiveness Metric 23
   21.3. County Hold 23
22. Planned Downtime-Wait 23
   22.1. BOE VRS Maintenance 23
   22.2. SOS Maintenance 23
   22.3. Wait Policy 24
23. Communication Changes 24
   23.1. BOE Password, FTP Directory, or Contact Email Changes 24
   23.2. BOE IP Address Change 24
   23.3. SOS FTP Password or Directory Change 24
   23.4. SOS IP Address Change 24
24. VRS Software Changes/Re-compliance 25
   24.1. VRS Software Changes – Re-compliance 25
25. Change Notification 26
   25.1. Communicating Changes to the SOS Database 26
   25.2. New Voters 27
   25.3. In-process Flag 27
   25.4. Changes to Voters 27
26. Duplicate Resolution 29
   26.1. Exact Match 30
   26.2. Potential Match 31
   26.3. Not a Duplicate 33
   26.4. Duplicating with Removed, Ineligible or Deceased Voters 33
   26.5. Multiple Duplicate Scenario 34

VI. APPENDIX A – Overview of Duplicate Handling Procedures 36
VII. APPENDIX B – Third-Party Access Control Policy 41
BUSINESS PROCEDURES MANUAL

I. Glossary of Terms

SOS: Ohio secretary of state.

BOE: Ohio county board of elections.

SWVRD: Ohio SOS Statewide Voter Registration Database.

CVRS: Central Statewide Voter Registration System, SOS based system.

VRS: Voter Registration System, BOE (county) based system

XML: Extensible Markup Language — A common computer language that permits the communication by and between as well as the electronic transfer of data between the BOE VRS and the SOS SWVRD

Packet: An information technology term used to identify the type of electronic transaction being applied to a voter registration record via the BOE VRS and the SOS SWVRD. An XML packet (transaction) may be passed from the BOE VRS to the SOS SWVRD or from the SOS SWVRD to the BOE VRS. There are multiple “XML packet” types and with few exceptions the prefix indicates the origin of the packet (e.g. “boe_vr_updt” is an XML packet from the BOE to the SOS attempting to update a voter record stored on the SWVRD).

TCP: Transmission Control Protocol — Software that enables two host computer systems to establish an electronic connection for the purpose of exchanging streams of data. TCP guarantees delivery of data and guarantees that XML packets will be delivered in the same order in which they were sent.

ACK: An XML packet used by TCP to acknowledge receipt of another XML packet. (e.g. during normal operations, a BOE_INIT is acknowledged with an SOS_ACK).  

NACK: An XML packet used by TCP to indicate a Negative Acknowledgement or Rejection of another XML packet.

BMV: Bureau of Motor Vehicles.

FTP: File Transfer Protocol — A standard process that enables the electronic transfer of files between computer systems that is supported by numerous hardware and software platforms.

FXS: A system that is sending and receiving data from the county.


Heartbeat: An XML packet used to test the accessibility of a BOE registration system from the SOS SWVRD. The SOS SWVRD sends a heartbeat packet to the BOE VRS every 15 minutes and upon BOE receipt, the BOE VRS sends a response heartbeat marking the BOE VRS as being accessible. However, after the SOS resends the transaction five times with no BOE response, the BOE VRS will be placed in a “hold” status. The “hold” will generate and send an e-mail error message informing the BOE they are not responding.
BUSINESS PROCEDURES MANUAL

Legal List: A list of legal code values used to identify such things as political district types, election types, registration location, party affiliation, registration type, address secondary indicator, street description, and street direction. (A complete list of all legal codes to be used in the voter registration system is available from the SOS.)

Unique Identifier: A SOS SWVRD generated unique identification number that is assigned to each voter registration record stored in the SOS SWVRD. Once generated, this unique number will be sent via an XML packet and will be included in any XML acknowledgement packets.

Resolution Process: Process by which the SOS will identify data integrity issues and procedural issues associated with the SWVRD and will then work with all VRS vendors and their corresponding BOEs to resolve and prevent these issues from reoccurring.

Data Integrity Issues: Errors that are specific to the data stored in the SWVRD (e.g. potential duplicate records, missing voters and potentially inaccurate voter records).

Procedural Issues: System functions (procedures) that are performed out of sequence, are not performed at all, performed unnecessarily, or performed too frequently.

Field: Space allocated within a database or spreadsheet that contains specific data.

Field Names: Names assigned to each field within the SOS SWVRD and the BOE databases (e.g. First Name, Last Name, and Data of Birth).

Field Definitions: Pre-defined controls and characteristics that determine what type of data each field may contain (e.g. numeric, alphabetic or alphanumeric) and how many characters each field may contain.

Field Descriptions: Pre-defined controls and characteristics that determine what data are “valid” for each field (e.g. “Party Affiliation” has a one character field and valid entries are “D,” “R,” “L,” “E,” and “N”) and whether the data are required, optional or restricted.

Record: A collection of related fields.

Voter Record: A collection of related fields containing information on a specific voter.

File Layout or Record Layout: Description of the voter registration data that includes all field names, data attributes and data characteristics associated with each voter record.

Report: A system generated collection of fields formatted and printed or displayed online.

Report Layout: A sequential arrangement of data fields and other text used to emphasize specific information.

Missing Voters: The term used when the SOS SWVRD has a voter record that indicates the voter resides in a specific county but that county’s BOE database has no matching voter record stored in it.

Duplicate Voter Record: The term used when the SOS SWVRD has two or more voter records in it that have been systematically identified as potentially being the same voter record.
BUSINESS PROCEDURES MANUAL

Double Precincts: The term used when the SOS SWVRD has more precincts listed for a particular county than that county’s BOE database has listed in it.

Wrong/Unassigned Districts: The term used when the SOS SWVRD has identified a voter record that has no assignment or an incorrect assignment for one or more of the six required political subdivision districts (e.g. congressional districts, districts of the State Senate, and House of Representatives are three of six required districts).

Error Message: A message that is systematically e-mailed from the SOS SWVRD to a BOE when a data error is detected by the SOS SWVRD system.

Dupe Messages: Common type of error message systematically e-mailed from the SWVRD to a BOE when two or more voter records are detected as potential “duplicate records.”

Audit Request: An electronic process conducted automatically at regularly scheduled intervals by the SOS SWVRD in which the SOS SWVRD links with a BOE’s database to access voter records in a precinct-by-precinct manner to compare the data stored on the SOS SWVRD with the data stored on the county’s BOE database.

State ID Messages: A message that is systematically e-mailed from the SOS SWVRD to a BOE, which includes a State ID number assigned by the SOS SWVRD to a voter, when the SOS SWVRD receives a new voter record from the BOE.

Election History: An electronic process conducted after each election in which a particular BOE updates its county database to indicate which voters have cast a ballot in that election and then subsequently electronically transfers/transmits the records to the SOS SWVRD.

Voter Query System: An SOS “real-time” application program that enables BOEs to perform searches on voter record information stored in the SOS SWVRD.

Voter Query: An automated process by which a BOE performs a search on a voter record stored on the SOS SWVRD in an effort to assist with provisional balloting, viewing voter history, or other voter record information.

Central Voter Registration System Manual: An SOS instructional guide that defines and explains the programmatic processes that may be used by BOEs to ensure proper use of the SOS voter registration system.

SWVRD Error Message Manual: An SOS instructional guide that lists error messages and their corresponding corrective actions that may be used by BOE staff to reference when receiving an e-mailed “error message” generated by the SOS SWVRD.
Voter File Layout & Field Names

**SOS Voter ID:** A unique 12 character ID with the first four characters always being “OH00,” which is assigned to each voter registration record.

**County Number:** All counties are assigned a unique two character numeric value. Valid county values are 01 – 88 (each individual county) “%” (all counties), “00” (SOS), “90” (BMV) and “SS” (unknown).

**County ID:** A unique 50-character field generated by a BOE voter registration system, which is assigned to each voter registration record.

**Last Name:** 50-character field representing the voter’s last name.

**First Name:** 50-character field representing the voter’s first name.

**Middle Name:** 50-character field representing the voter’s middle name.

**Suffix:** 10-character field representing a suffix to the voter’s name (e.g. Jr., Sr., and III).

**Date of Birth:** 10-character field representing the voter’s date of birth (MM/DD/YYYY).

**Registration Date:** 10-character field representing voter’s registration date (MM/DD/YYYY).

**Party Affiliation:** One-character field representing the voter’s party affiliation. Valid values are: “D” (Democrat), “E” (Reform), “L” (Libertarian), “N” (Natural Law), and “R” (Republican). If the field is left empty, the voter is considered independent.

**Residential Address 1:** 100-character field representing the voter’s street address. Post office box numbers are invalid.

**Residential Address 2:** 100-character field representing the voter’s street address. Post office box numbers are invalid.

**Residential City:** 50-character field representing the voter’s city of residence.

**Residential State:** 20-character field representing the voter’s state of residence.

**Residential ZIP:** 5-character field representing the voter’s ZIP code.

**Residential ZIP Plus 4:** Four-character field representing the voter’s ZIP + 4 code (e.g. 12345-6789).

**Residential Country:** 50-character field representing the voter’s foreign country of residence.

**Residential Postal Code:** 10-character field representing the voter’s foreign country.

**Mailing Address 1:** 100-character field representing the voter’s mailing addresses.

**Mailing Address 2:** 100-character field representing the voter’s mailing addresses.

**Mailing City:** 50-character field representing the voter’s mailing address city.
BUSINESS PROCEDURES MANUAL

Mailing State: 20-character field representing the voter’s mailing address state.

Mailing ZIP: Five-character field representing the voter’s mailing address ZIP code.

Mailing ZIP Plus 4: Four-character field representing the voter’s mailing address ZIP + 4 code (e.g. 12345-6789).

Mailing Country: 50-character field representing the voter’s foreign country mailing address.

Mailing Postal Code: 10-character field representing the voter’s foreign country mailing address postal code.

Career Center: 20-character field representing the voter’s educational career center. There are 40 defined career centers in Ohio. Valid codes are CC, followed by the career center name or the center’s abbreviation.

City: 20-character field representing the voter’s city; this is currently an unused field.

City School District: 20-character field representing the voter’s city school district. Valid codes are “CSD” followed by a five-digit code.

County Court District: 20-character field, this field is currently NOT available for use.

Congressional District: 20-character field representing the voter’s U.S. congressional district. Valid codes are “CD”, followed by a three-digit congressional district (001-018 are currently valid).

Court of Appeals: 20-character field representing the voter’s Ohio Court of Appeals district. Valid codes are “CA” followed by a three-digit district number, (001-012 are currently valid).

Education Service Center: 20-character field; currently unavailable for use.

Exempt School District: 20-character field representing the voter’s exempted village school district. Valid codes are “EVSD” followed by a six-digit code.

Local School District: 20-character field representing the voter’s local school district. Valid codes are “LSD” followed by a six-digit code.

Municipal Court District: 20-character field representing the voter’s Municipal Court district. Valid codes are “MC” followed by description of the municipality or county (e.g. MC-FRNLKLN-CO).

Precinct Code: 20-character field representing the voting jurisdiction in which the voter resides. Valid precinct codes start with the two-digit county code followed by three or four letters (e.g. 01-ABC).

State Board of Education: 20-character field representing the voter’s State Board of Education district. Valid codes are “SBE” followed by a three-digit district number (001-011 are currently valid).
BUSINESS PROCEDURES MANUAL

State Representative District: 20-character field representing the voter’s Ohio House of Representatives district. Valid codes are “SR” followed by the three-digit House of Representatives district (001-099 are currently valid).

State Senate District: 20-character field representing the voter’s Ohio Senate district. Valid codes are “SS” followed by a three-digit Senate district, (001-033 are currently valid).

Township: 20-character field representing the voter’s township.

Village: 20-character field representing the voter’s village, currently unavailable for use.

Ward: 20-character field representing the voter’s ward, currently unavailable for use.

II. Introduction

The Help America Vote Act (HAVA) of 2002 was signed into federal law on October 29, 2002. The goal of the legislation was to improve administration of elections nationwide, therefore, states were required to implement and maintain new federal mandates designed to meet this objective.

A significant initiative under HAVA is the requirement that each state, acting through its chief election official (in Ohio the secretary of state), shall implement a Computerized Statewide Voter Registration List (database). This single, uniform, official, centralized, interactive list is defined, maintained, and administered at the state level. This list contains the name and registration information of and assigns a unique identifier to every legally registered voter in the state. This computerized list shall serve as the official voter registration list for the conduct of all elections for federal office in the state.

HAVA further states that all voter registration information obtained by any local election official in the state shall be electronically entered into the computerized list on an expedited basis at the time the information is provided to the local official. The appropriate state or local official shall provide adequate technological security measures to prevent the unauthorized access to the computerized list established under this section of HAVA.

Thus the purpose of this Business Procedures Manual is to document the HAVA Statewide Voter Registration Database System operating procedures for Ohio county boards of elections (BOE). The document will also serve as a “desk-ready” reference for processes and questions related to the SOS SWVRD. Although this manual addresses the SWVRD HAVA requirements, the state of Ohio election laws will be noted where appropriate.
III. Statewide Voter Registration Database

1. Security of Voter Information

Every effort must be employed by all parties to prevent unauthorized access to the SOS SWVRD. For additional information regarding system access, please refer to the “Third-Party Access Control Policy” in Appendix B.

2. Passwords, Login/Logout, Open Connections

Specific policies and procedures that will help to ensure the security and integrity of the SWVRD are addressed separately in the Annex on Security. Security measures currently include:
- Password policies;
- Login and logout procedures; and
- Automatic connection timeout.

3. Controlled Access Area

Specific policies and procedures regarding the physical access of the servers that house the SWVRD are addressed separately in the Annex on Security.

4. Synchronization

The SOS SWVRD and BOE VRS databases must be kept synchronized. In most cases the synchronization of the databases will be handled systematically and will be transparent to SOS and BOE staff members. However, every effort must be made by the BOEs to keep the SOS SWVRD synchronized with the BOE’s VRS databases by performing timely voter record maintenance and resolving potential duplicate voter records. This is especially critical prior to the BOE’s printing of poll books for an election.

5. Frequency of Updates with the Secretary of State

The majority of voter registration record updates within a BOE VRS database are electronically communicated to the SOS SWVRD via XML packets. Such updates are systematic and transparent. The BOE staff will not be required to learn and understand XML.

6. Data Cleanup

The SOS SWVRD will electronically notify a specific BOE VRS via XML packet and BOE staff via email when data integrity issues are discovered, or when a possible problem may exist, such as potential duplicate voter registration records.

Data integrity issues and other reported problems must be investigated using SOS or BOE defined business processes. Upon determination of an actual error, the BOE must initiate corrective action within two business days of such discovery.

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