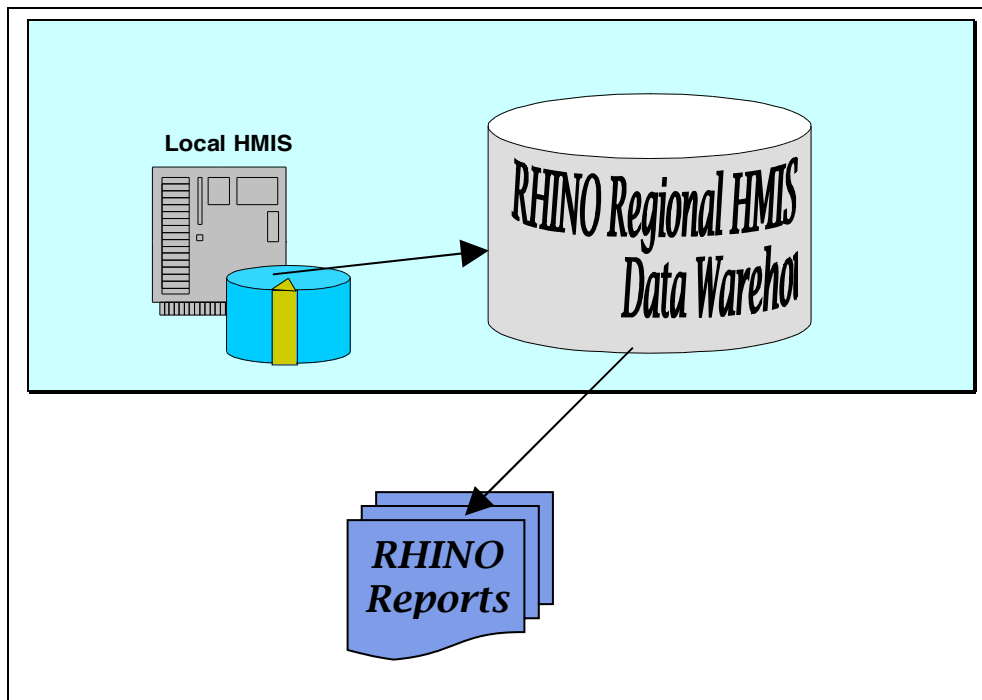


The Bay Area Regional Homelessness Data Warehouse Project

Policies and Procedures for Implementation and Operation of RHINO

Version 1.0

A Community Practice White Paper



*Office of Community Planning and
Development*

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November 2007

Acknowledgments

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Part A: White Paper Introduction and Lessons Learned

This white paper is the third in a series documenting the planning and implementation of the Regional Homeless Information Network (RHINO) project of the San Francisco and Monterey Bay Area. RHINO is a project of the Bay Area Counties Homeless Information Collaborative (BACHIC), which is composed of the 11 Continua of Care (CoC) in the region. RHINO is a regional data warehouse project merging Homeless Management Information System (HMIS) data from each of the participating CoCs. As described more fully below, the purpose of RHINO is to enable the development of a comprehensive, de-duplicated data picture of homelessness across the entire region¹—including demographics, homeless mobility patterns, and gaps in services—thereby giving policymakers, funders, and service providers a better understanding of homelessness within region.

The first two white papers are general reports that detail RHINO practices in project planning and governance and system design and technology, respectively, while drawing out lessons learned and providing model planning materials and technical specifications for the benefit of other regional or statewide HMIS data warehouse planners.

Following is a brief summary of the previous white papers:

- 1. **Planning and Governance.** The Bay Area Regional Homelessness Data Warehouse Project available at <http://hmis.info>. Key topics include: key data warehouse concepts and definitions, building the regional planning process, regional project governance, assessing regional needs and capacity, and developing a vision for regional data and collaboration.*
- 2. **System Design and Technology.** The Bay Area Regional Homelessness Data Warehouse Project available at <http://hmis.info>. Key topics include: data warehouse goals and design requirements, overall system architecture, central server structure, local HMIS data preparation and transmission, de-duplication and the Regional Unique Identifier, and privacy and security measures.*

Unlike the first two white papers, this document is intended not as a general report, but as a set of operational policies and procedures. In this way, it not only meets the project's need for a framework for the initial implementation and ongoing operation of RHINO, but also provides a

¹ *The Bay Area is the geographic size of Maryland and has a population of 7,512,499.*

model set of regional HMIS data warehouse policies and procedures, perhaps the first of its kind, for others to borrow and adapt.

1. A Word About Policies and Procedures

Policies reflect consensus on matters of value or importance. Procedures are the steps or methods to operationalize the policies. Written policies and procedures are critical to the success of any complex technological endeavor involving multiple stakeholders. Policies and procedures² are an important means for documenting key understandings and decisions that affect the project. Moreover, they serve as a means for communicating to project stakeholders what is important, what each participant's roles and responsibilities are, and how key project activities and functions will be carried out. Finally, the policies and procedures provide an effective reference tool for orienting and training staff.

Because the project circumstances will change over time, the policies and procedures should be viewed as a work-in-progress, to be revised and updated on a regular basis and communicated to all participants.

2. Summary of Lessons Learned

LESSONS LEARNED: DEVELOPING POLICIES AND PROCEDURES

- 1. Early on, begin to identify common values and track areas of policy agreement among participants. Create the policies and procedures around these areas of agreement.*
- 2. Spend time pinpointing the policy concerns and differences that may exist among regional participants. Work hard to facilitate consensus around solutions and compromises that will work for all. Take as much time as is needed. The biggest questions for BACHIC related to control of local data in the regional database and the process for the review and release of RHINO reports.*
- 3. Don't hesitate to borrow from local HMIS policies and procedures. Using concepts, language, and formats that are already familiar to participants will help engender understanding and acceptance of the regional data warehouse policies and procedures.*
- 4. Think about the unique roles and relationships among participants, and make sure the policies and procedures provide adequate guidance for these roles and relationships.*
- 5. Consider carefully what subject areas need to be covered. In a collaborative regional HMIS data warehouse project, key subject areas will certainly include participation and governance, data transmission, privacy and security, and data*

² Called "operational manual" or "standard operating procedures" in some communities.

reporting and release.

6. Be aware that the procedures required for the initial implementation of the project may differ from those needed for the more stable period of ongoing project operations. Of necessity, the initial implementation procedures may be more detailed at first. Ongoing operations procedures should be fleshed out in later updates as the operational needs and challenges become more apparent.

Part B: RHINO Data Warehouse Policies & Procedures

1. Project Introduction

This document provides the framework for the initial implementation and ongoing operation of the Bay Area Regional Homeless Information Network Project (RHINO). RHINO is a project of the Bay Area Counties Homeless Information Collaborative (BACHIC). The project implements and operates a regional data warehouse of Homeless Management Information System (HMIS) data from the following 11 participating Continua of Care (CoC) in the San Francisco and Monterey Bay Area:³

1. *Alameda County CoC.*
2. *Contra Costa County CoC.*
3. *Marin County CoC.*
4. *Monterey County CoC.*
5. *Napa County CoC.*
6. *San Francisco City and County CoC.*
7. *San Mateo County CoC.*
8. *Santa Clara County CoC.*
9. *Santa Cruz County CoC.*
10. *Solano County CoC.*
11. *Sonoma County CoC.*

The Project Overview, below, sets forth an overview of the project as well as RHINO's statements of vision, mission, and benefits. Following the Project Overview are specific policies and procedures to further define and manage the project's initial implementation and ongoing operation in the following areas:

- *Partner Roles.*
- *Participation and Governance.*
- *Data Preparation and Transmission.*
- *Confidentiality and Security.*
- *Data Analysis and Reporting.*

Many of the policies and procedures in this document reflect BACHIC decisions recorded in BACHIC Meeting Minutes, the RHINO Project Planning and Decision Document, the BACHIC Decision Log, as well as a

³ *Please note that the geography of every CoC in the region corresponds with the geography of a county. Thus, the terms "CoC" and "county" are often used interchangeably in this document.*

variety of other supplementary documents. Each of these supplementary documents is listed below with a brief summary, the pages where it is referenced in this document, and its primary intended audience (in terms of staff category). For ease of reference, the supplementary documents are also listed under relevant sections of the policies and procedures (starting with Section 4, Participation and Governance) later in this document.

Policies and Procedures Supplementary Documents

Key Document & Where to Find It (If Applicable)	Reference d pp. Below	Primary Audience	Document Summary
Policy-Level Documents			
<i>BACHIC Meeting Minutes (Not applicable)</i>	N/A	<i>BACHIC representative</i>	<i>Documents BACHIC meeting proceedings, including any key issues discussed and decisions made.</i>
<i>RHINO Project Planning and Decision Document (see Planning and Governance White Paper, Appendix D)</i>	10	<i>BACHIC representative</i>	<i>Tracks the status of all key planning, design, and implementation decisions required for RHINO. Used to set meeting agendas.</i>
<i>BACHIC Decision Log (Not applicable)</i>	10	<i>BACHIC representative</i>	<i>Documents all key decisions and agreements made affecting RHINO.</i>
<i>Overview and Guiding Principles for RHINO (see Planning and Governance White Paper, Appendix A)</i>	7, 9	<i>BACHIC representative</i>	<i>Records the basic understandings and expectations regarding each CoC's participation in RHINO.</i>
Technical-Level Documents			
<i>RHINO CSV File Format Specification 2.7.4 (see System Design and Technology White Paper, Appendix _)</i>	8, 11, 13, 14, 15, 16	<i>HMIS Staff</i>	<i>Delineates the comma separated value (CSV) file format (as adapted and extended from the HUD format below) used for export of HMIS files to RHINO.</i>
<i>HUD HMIS CSV Specification 2.7 (see System Design and Technology White Paper, Appendix _)</i>	14	<i>HMIS Staff</i>	<i>Provides a CSV format available to all CoCs for meeting the HUD standard that all HMISs must be capable of exporting data in a CSV format (see HMIS Standards, Data Export, p. 45934).</i>
<i>RHINO Mapping Instructions and Mapping Tables (Not applicable)</i>	13, 14, 15	<i>HMIS Staff</i>	<i>Furnishes a tool for documenting the mapping of data from HMIS values to RHINO values.</i>
<i>RHINO RUID Technical Specification 1.2 (see System Design and Technology White Paper, Appendix _)</i>	15	<i>HMIS Staff</i>	<i>Establishes the steps for use of a Regional Unique ID for the region-wide de-duplication of data.</i>
<i>RHINO CoC Export Guidelines 1.1 (see System Design and Technology White</i>	14	<i>HMIS Staff</i>	<i>Defines the process and practices for interpreting, transforming, and extracting</i>

<i>Paper, Appendix _</i>			<i>data from HMISs to the RHINO CSV format.</i>
<i>National HMIS Data and Technical Standards (Not applicable)</i>	<i>11, 12, 13, 18, 19, 25</i>	<i>All participants</i>	<i>Sets forth uniform national HMIS standards for data, privacy, security, and technical issues.</i>
<i>RHINO Security Policy and Specification (see System Design and Technology White Paper, Appendix _)</i>	<i>19</i>	<i>HMIS Staff</i>	<i>Establishes the policy and technical specifications for network, systems, and physical security for RHINO data access.</i>

The “procedures” parts of this document below include subsections where needed for “initial implementation” of RHINO and “ongoing operation” of the project. All activities of the project lead agency, Community Technology Alliance, are subject to funding availability.

These policies and procedures will be updated and revised as needed from time to time by BACHIC (especially in the area of “ongoing operation”). Therefore, each version of this document will be identified (on the cover) by a version number and effective date. Updated or new policies and procedures will have retroactive applicability unless otherwise specified.

2. Project Overview, Vision, and Benefits

Pursuant to Congressional direction, communities that receive U.S. Department of Housing and Urban Development (HUD) funding for homelessness-related services were encouraged to implement computerized systems—or HMISs—to collect and manage data on their homeless clients by October 2004.

In response to this national HMIS initiative, the CoCs within the 11 counties of the greater San Francisco and Monterey Bay Area engaged in a process to plan and implement HMIS systems within their jurisdictions. These counties have come together in a regional group—BACHIC—to leverage learning and expertise across the multiple communities and to facilitate the creation of RHINO, a regional data warehouse that brings county HMIS data together for a composite picture of the homeless population and services across the BACHIC region.

a. Vision

BACHIC brings together 11 counties to collaborate on a regional data warehouse and to provide input into the development and coordination of regional policies on homelessness. BACHIC's vision is to enhance participants' collaboration and data collection capabilities, leading to a better understanding of the homeless population in the region. The regional data warehouse will be a rich repository of information that will provide data that will be utilized to analyze trends, gaps in services, and mobility patterns among homeless people, and inform homeless funding and policy directions. The regional data warehouse will give policymakers, service providers, and funders a better understanding about homelessness within the region. The analysis of regional data will allow for better planning and resource management and an increased ability to address the present and future needs of homeless people in the BACHIC region.

b. Benefits

- The ability to bring together a consolidated de-duplicated picture of homelessness across the region to better understand the characteristics and mobility patterns of the homeless population and how this affects individual communities and agencies within the region.*
- The ability to identify the prevalence of chronic homelessness across county boundaries, thereby enabling service agencies to offer and provide appropriate services to the affected homeless population.*

- *The ability to provide funders of homeless service agencies a better regional picture of the needs of homeless individuals and families and the ability to better target their investments in housing and homeless services.*

3. Partner Roles

Summary

This section sets forth the basic roles for each of the project's key partners, which include: BACHIC, Community Technology Alliance (Project Lead Agency), local CoC BACHIC representative, local HMIS staff, and a regional data analyst.

a. BACHIC

- *Provide governance on project policy and policy guidance.*
- *Work with the lead agency to develop guiding principles, participation understandings, and plan for implementation of RHINO.*
- *Define RHINO data reporting and release (see Section 7 of this document).*
- *Encourage regional data collaboration.*
- *Leverage HMIS lessons and learning across the region.*
- *Provide strategies for ongoing sustainability and funding of RHINO.*
- *Coordinate with other regional groups and bodies on issues of homelessness.*

b. Community Technology Alliance (Project Lead Agency)

- *Work with BACHIC to design and implement the infrastructure and technical process for implementing RHINO, including developing unique regional solutions.*
- *Provide advice on hardware and software selection.*
- *Host and operate RHINO's central server operations.*
- *Serve as RHINO's project manager.*
- *Serve as RHINO's system administrator.*
- *Provide technical assistance and guidance to participating CoCs regarding preparation and transmission of HMIS data to RHINO.*
- *Conduct project design testing and piloting.*
- *Oversee RHINO system security.*
- *Oversee RHINO system disaster backup and recovery.*
- *Prepare quarterly data summary reports.*
- *Provide liaison with HUD regarding RHINO.*

c. Local CoC BACHIC Representative

- *Represent the local CoC in all BACHIC meetings, decisions, and activities.*

- *Attend and actively participate in all BACHIC meetings.*
- *Work with other BACHIC representatives to facilitate the success of RHINO.*
- *Participate in BACHIC listserv communications between meetings.*
- *Serve as the liaison between BACHIC and local CoCs and governments on all issues of data reports, coordination, and resources.*
- *Facilitate coordination between the project lead agency and local HMIS staff.*

d. Local HMIS Staff

- *Conduct all local technical activities needed to prepare for RHINO participation.*
- *Carry out the mapping of local data elements to the standardized RHINO comma-separated value (CSV) specifications.*
- *Clean, prepare, and transmit local HMIS data to RHINO on a monthly basis, using the RHINO CSV format and a Secure Shell 2 (SSH2) 128-bit encryption shell.*
- *Ensure the local HMIS (including data sent to RHINO) is in compliance with HUD Standards and local confidentiality and quality requirements.*
- *Request and receive technical assistance and guidance as needed from the project lead agency staff.*
- *Coordinate with and assist the project lead agency staff on issues of local data compliance and troubleshooting.*

e. Regional Data Analyst

- *Work with BACHIC to identify the regional questions or issues to be addressed and other RHINO data analysis and reporting considerations and parameters.*
- *Work with the project lead agency to identify, assess, prepare, and analyze RHINO data for reports.*
- *Identify, assess, and collect any non-RHINO regional data (e.g., point-in-time homeless counts or CoC housing inventories) that may be desired for data depth and context.*
- *Use appropriate business or social services software and/or other tools to analyze RHINO data and prepare needed statistics, charts, and graphs, etc.*
- *Write regional analytical reports (confidential draft reports will be provided to BACHIC and BACHIC comments will be incorporated into final reports).*
- *Comply with all RHINO data release and reporting procedures (see Section 7, below, of this document).*

4. Participation and Governance

Summary

This section summarizes the basic agreements and understandings relating to each CoC's participation in—and BACHIC governance of—RHINO.

Supplementary Documents

- *Overview and Guiding Principles for RHINO*
- *RHINO Decision Log*
- *RHINO Project Planning and Decision Document*

General Policies

- *BACHIC is the governance body for RHINO, responsible for overall guidance and key project decisions and agreements.*
- *The basic understanding and agreements governing CoC participation in RHINO are set forth in the governance document, “Overview and Guiding Principles for RHINO.”*
- *RHINO is a collaborative effort among co-equal partners. Its success depends upon the willingness of the partners to share not only the benefits of the project, but also the responsibilities.*
- *Key project decisions are made primarily by group consensus. Building consensus is one of the group’s most important activities, and critical issues will receive the time and attention needed to achieve consensus.*
- *RHINO is a regional project. Therefore, BACHIC members keep a broader regional perspective in the forefront when discussing and making decisions about RHINO.*

Procedures

a. Governance and Decisions

- *BACHIC meets as needed in order to govern the RHINO project and make all necessary decisions.*

- *BACHIC may from time to time create a committee or committees to handle specific activities relating to RHINO. The work and decisions of such a subordinate committee or committees is subject to the approval of BACHIC.*
- *Decisions are made by group consensus. Each CoC carries equal weight in the decision process. A decision by consensus requires a quorum of a minimum of 51 percent of participating CoCs.*
- *Decisions can occur in a BACHIC meeting or (for efficiency purposes) via the BACHIC listserv, with return receipt. For a listserv decision, sufficient written information must be included or attached to support a decision, and a specified deadline that is reasonable under the circumstances must be provided for review, approval, and comment.*
- *BACHIC decisions and agreements are valid when adopted and recorded in the RHINO Decision Log and RHINO Project Planning and Decision Document; separate written agreements are not needed.*

b. CoC Participation

- *Each participating CoC appoints its own BACHIC representative. It is recommended that the local representative be the local CoC or homeless coordinator or similar person with a CoC-wide homeless policy role.*
- *Each participating CoC will provide BACHIC and the project lead agency with the name, title, and contact information of its local BACHIC representative and will notify BACHIC and the project lead agency if its local BACHIC representative changes for any reason.*
- *BACHIC representatives will make a good-faith effort to attend all meetings and to participate actively in the discussion and decision process. If absolutely necessary, the BACHIC representative may send an “alternate,” but will not abuse this right.*
- *A BACHIC representative may bring other local staff to meetings, such as the local HMIS staff, when their views or perspectives can help inform decisions.*
- *CoCs may cease participation in RHINO at any time; however, each participating CoC understands that a decision of one CoC to leave RHINO would have an adverse impact on the other collaborating CoCs and upon the quality of regional data. Therefore, each local CoC*

representative will negotiate in good faith with BACHIC to find a solution that will allow continued RHINO participation.

5. Data Preparation, Transmission and Receipt

Summary

This section sets forth the policies and procedures that govern the preparation and transmission of data for RHINO by participating CoCs and the receipt of data by the project lead agency. It details issues such as the timing of data transmission, data requirements, use of the RHINO CSV specification, mapping of data to the CSV specification, use of the Regional Unique Identifier (RUID), data transmission, confirmation of data receipt and the handling of data “exceptions,” technical assistance, and stipends.

Supplementary Documents

- *RHINO CSV File Format Specification 2.7.4*
- *HUD HMIS CSV Specification 2.7*
- *RHINO CoC Export Guidelines 1.1*
- *RHINO Mapping Instructions and Mapping Tables*
- *RHINO RUID Technical Specification 1.2*

General Policies

- *The only data requested for RHINO will be those which participating CoCs already collect or agree to provide for regional purposes (e.g., the RUID).*
- *No data will be transmitted to RHINO that do not support regional goals as defined in the project Vision and Benefits above; thus, the process will allow for the regional de-duplication of data.*
- *The data requirements and transfer specifications do not “re-invent the wheel,” but build upon existing HUD frameworks and upon common data and technical practices in the region.*
- *The data integration and transfer specifications will meet the HUD Standards, be user friendly, cost effective, labor efficient, and be easily adaptable to potential future changes to the data warehouse.*
- *Transmission security will meet both HUD and common business practice standards for security.*

Procedures

a. Timing (Data Export Period)

Initial Phase

- *The order of the initial contribution of HMIS data from each CoC to RHINO (project startup) depends upon the relative readiness of each CoC to contribute data. Each participating CoC will work with the project lead agency to determine an appropriate time range for its initial data contribution. The project lead agency will maintain and update as needed a RHINO implementation timeline indicating the 2-month timeframe within which each CoC will begin contributing HMIS data.*
- *During 2007, each participating CoC will contribute data once. In the initial phase, CoCs will generate a number of RHINO data sets, preferably one for every month, for the time period between when they began collection of HMIS data (to HUD Standards) and the current date. This will provide good granularity in the data and will show changes to clients in the past.*

Ongoing Operation

- *Beginning January 1, 2008, the regular data export period will be monthly. Local HMIS staff will coordinate with RHINO project staff to ensure regular and smooth data transmissions. If a CoC needs an exception to the monthly HMIS data export period for any reason, it will contact RHINO project staff and work out a mutually convenient alternative.*

b. Data to be Submitted

Initial Phase

- *Each participating CoC has agreed to contribute the National HMIS Standards universal and program data elements to the extent that they collect them, except that some elements constituting Personal Protected Information (PPI) will not be provided (see below). The following is a summary list of all HUD elements:*

Universal and Program Elements from HUD Standards

Universal Data Elements	Program Data Elements
<ol style="list-style-type: none"> 1. Name 2. Social Security Number 3. Date of birth 4. Ethnicity and race 5. Gender 6. Veteran status 7. Disabling condition 8. Residence prior to program entry 9. ZIP Code of last permanent address 10. Program entry date 11. Program exit date 12. Unique person ID number 13. Program ID number 14. Household ID number 	<ol style="list-style-type: none"> 1. Income and sources 2. Non-cash benefits 3. Physical disability 4. Developmental disability 5. HIV/AIDS 6. Mental Health 7. Substance abuse 8. Domestic violence 9. Services received 10. Destination 11. Reason for leaving 12. Employment 13. Education 14. General health status 15. Pregnancy status 16. Veterans' information 17. Children's education

- For confidentiality reasons, certain of the HUD data elements, listed above, that constitute PPI will not be submitted. The data exports from CoCs to RHINO will not transmit the following:
 - First, middle, and last names, and suffixes.
 - Social Security Number.
 - Date of birth.

- Additional elements (extended beyond the HUD data elements) required for regional purposes include:
 - Regional Unique Identifier (see subsection e., below, “Use of RUID”).
 - Anonymous element.
 - ZIP Code of program (first time data is exported).

- Some allowable values for specific HUD data elements have been modified slightly within the CSV schema (see subsection c., below, “Use of RHINO CSV Specification”) to reflect regional practice or for improved data quality or management. Examples include changes to values for gender, race, and highest school level.

- To provide a better understanding of the completeness of regional data, each participating CoC will initially identify for RHINO staff any HUD universal or program elements that they are not entering into HMIS, using the RHINO Mapping Tables.

Ongoing Operation

- Each participating CoC will keep the project lead agency informed of

any future changes in the local data elements collected or significant changes in practices regarding data collection.

c. Use of RHINO CSV Specification

Initial Phase

- *Each participating CoC will provide HMIS data in the form of a set of CSV- formatted files that match the latest version of the RHINO CSV File Format Specification. There are eight separate files or tables in the CSV specification. The RHINO CSV File Format Specification is an extension (for regional purposes) of the HUD HMIS CSV Format.*
- *Each participating CoC will use the RHINO CoC Export Guidelines 1.1 as a guide to compiling and formatting the CoC's HMIS data into the RHINO CSV File Format Specification.*
- *It is recommended that CoCs use the RHINO CSV database tables to help format and validate their data prior to transmitting them to RHINO. RHINO staff will use the same tables to validate data received from CoCs.*
- *As mentioned above, in the initial data transmission, which may include multi-year data, participating CoCs will provide data in monthly increments in order to provide sufficient data granularity for analytical purposes.*

Ongoing Operation

- *Subsequent monthly data transmissions can be either:
 - *Only data that has been updated since the previous data set (referred to in the RHINO Export Guidelines as “Simplified Export Process”), or*
 - *All data for all time (“Detailed Export Process”).**
- *The data specification may be changed by BACHIC to an Extensible Markup Language (XML) format similar to the HUD XML Schema Definition for HMIS data.*
- *The CSV specification may be revised from time to time based on*

BACHIC decisions and thus will be identified by a version control number, e.g., 2.7.1. Changes may include revisions or extensions to the HUD-required elements, as agreed by BACHIC for regional purposes.

d. Mapping of Data to CSV Format

Initial Phase

- In preparing for the initial transmission of HMIS data to RHINO, each participating CoC will by mid-August 2007 document the mapping of HMIS data to the RHINO CSV specification. This is to ensure that data are located appropriately in RHINO and to help identify any data inconsistencies or mapping challenges.*
- In the initial mapping to RHINO, each participating CoC will use the Mapping Instructions and Mapping Tables.*
- Additional documentation for initial mapping purposes: Each participating CoC will document for the project lead agency any elements or response categories in the RHINO CSV specification it is **not** collecting.*
- Regional data mapping patterns and issues will be used to revise and improve the RHINO CSV specification.*

Ongoing Operation

- Where a CoC's data response category has no reasonable HUD value and its response rate is no more than 2.5 percent (of that CoC's data), it will be mapped to "other," or to "null" if the data element does not have a choice of "other."*
- Responses in the wrong client file (e.g., children's data in a parent's record) will be excluded from the RHINO database if they account for less than 5 percent of the relevant responses. If 5 percent or above, the CoC will either correct the underlying data or work with the project lead agency to map it to the correct file.*
- Each participating CoC will map to "chronic homeless" using the HUD-defined elements of chronic homelessness, unless the CoC explicitly asks a yes-no question regarding a person's chronically homeless status.*
- Should a participating CoC change the data elements and responses it collects, it will work with the project lead agency to appropriately map the revised data elements and responses.*

e. Use of RUID

- *The purpose of the RUID element within the RHINO CSV file set is to allow for the de-duplication of HMIS data across different CoC systems, while maintaining the confidentiality of clients.*
- *Each participating CoC will complete the RUID element in the CSV client table for each HMIS client included in data transmissions to RHINO.*
- *Each participating CoC understands that the RUID algorithm is confidential and must not be disclosed to any unauthorized person.*
- *To receive authorization and a password to access the RUID Technical Specification, local HMIS staff should provide a written request (e-mail or letter) to RHINO staff. Once the local HMIS staff member is authorized, RHINO staff will transmit the password via telephone or other secure method.*
- *The only exceptions to the use of the RUID element are anonymous clients. The anonymous element in the CSV client table must be completed for each anonymous client.*

f. Data Transmission

- *HMIS data in completed CSV file sets will be combined into an encrypted archive file and then sent via the Internet to the RHINO Data Upload server.*
- *All HMIS data must be encrypted during transmission using the current business practice standard for security of SSH2, 128-bit encryption.*
- *Prior to the initial transmission of HMIS data, the local HMIS staff must request and receive a password and instructions for accessing the RHINO Upload Server. It is a violation of RHINO security rules for HMIS staff to access the Upload Server for any purpose other than data transmission. Local BACHIC representatives will be notified of any deviations from this rule by their local HMIS staff.*
- *Local HMIS staff must notify and receive confirmation from RHINO staff of the date and time for each transmission. Transmission between 5 p.m. and 9 a.m. weekdays is preferable.*

g. Confirmation of Data Receipt and Handling of Data Exceptions

- *RHINO staff will provide the person transmitting data with an e-mailed*

confirmation of the successful receipt of each data transmission.

- *Any data exceptions that do not match the RHINO CSV File Format Specification will cause the entire data set from that CoC to be rejected from data load into RHINO. An explanation of the error will be provided to the CoC along with a request to correct and re-transmit its data by a specified date.*
- *Participating CoCs are responsible for the completeness and quality of HMIS data submitted to RHINO.*

h. Technical Assistance

Initial Phase

- *Technical assistance from the project lead agency staff is available to participating CoCs to assist them in issues of use of the CSV specification, data mapping, data preparation, use of the RUID, and data transmission.*
- *Technical assistance is limited by the funding available and is on a first-come, first-serve basis. The project lead agency reserves the right to prioritize limited technical assistance resources on the basis of CoC need.*
- *Technical assistance may be delivered via phone, e-mail, site visit, or regional group activity, and may include a technical review or needs assessment; problem identification and solving; advice or assistance with data mapping, use of the CSV specification, and/or the RUID; help with locating and implementing SSH2 encryption; aid in properly transmitting data; and other technical issues as needed. However, it does not include direct coding on a CoC system to format and extract data.*
- *Technical assistance may be accessed by contacting the project lead agency.*

6. Data Confidentiality and Security

Summary

This section specifies the policies and procedures that govern the critical topic of data confidentiality and security. Key issues covered are the importance of local HMIS privacy and security compliance, the role of the RHINO Regional Security Framework, the limitation on the use of PPI, and the use and protection of the RUID specification.

Supplementary Documents

- *National HMIS Data and Technical Standards*
- *RHINO Security Policy Specification*
- *RHINO RUID Technical Specification 1.2*

General Policies

- *The desire for regional data and the need for individual privacy are viewed as complementary rather than competing objectives.*
- *The project will meet and exceed the National HMIS Privacy and Security Standards, as well as any more-stringent local privacy and security measures of participating CoCs.*
- *All security measures will be in accordance with common business practices.*
- *Only HMIS data specified by BACHIC will be provided to RHINO. No other data will be provided.*

Procedures

a. The Importance of Local HMIS Privacy and Security Compliance

- *It is understood that each participating CoC is in compliance with the confidentiality and security requirements of the National HMIS Data and Technical Standards and any other local privacy and security requirements. This includes agency privacy policies, wall postings or other privacy-related notices to clients, consent or release of*

information forms, procedures for implied or informed express consent, HMIS user agreements, and all other privacy and security-related requirements.

- *All client data provided to RHINO will be in accordance with local client consent and/or other applicable information release procedures. Local CoCs will be responsible for their own compliance and will hold the project lead agency harmless for deviations from this requirement.*

b. RHINO Regional Security Framework

- *The security procedures for RHINO data access are set forth in the document entitled RHINO Security Policy Specification. This document encompasses:*
 - *The basic security policy statement.*
 - *Network and system security specifications.*
 - *Data upload security specifications.*
 - *Project lead agency database access.*
 - *Physical access to servers.*
- *All security measures relating to encryption, firewalls, static Internet providers (IP) addresses, automatic security updates, HUD password controls, database access and authorization, access audits, anti-virus software, etc. are in the Security Policy Specification document.*
- *Disaster protection and recovery services will meet the minimum HUD standards relating to the backing up or copying and offsite storing of RHINO data.*
- *HMIS data submitted to RHINO will be destroyed if they have not been updated for 7 years. On an annual basis, the project lead agency will review all RHINO records and destroy those that have not been updated in the previous 7 years.*

c. Limitation on PPI

- *It is a key project policy to protect individual privacy by limiting the transfer of PPI from local CoCs to RHINO to the maximum extent possible within regional data objectives. Thus, certain of the HUD data elements that constitute PPI will not be submitted. The data exports from CoCs to RHINO will not transmit the following:*
 - *First, middle, and last names, and suffixes.*
 - *Social Security Number.*
 - *Date of birth.*

d. Use and Protection of the RUID

- *Participants agree not to disclose the RUID, its formula, or any elements of its formula to any unauthorized person. Authorization is limited to those with a specific need to know the RUID. This includes local BACHIC representatives, consultants or others working on BACHIC or RHINO efforts, local HMIS staff members responsible for creating the RUID element, and project lead agency staff (including consultants).*
- *Access to the RUID specification will be controlled by the project lead agency. The specification will be clearly labeled “Private and Confidential. Do Not Disclose to Unauthorized Persons.” The electronic version of specification will be protected by password control. All paper copies of the specification must be kept under lock and key or in another secure location.*

7. RHINO Regional Data Reporting and Release

Summary

This section specifies the policies and procedures pertaining to BACHIC's governance of RHINO data reporting and release, as well as the process for developing regional data reports. Dealing with both initial report development and ongoing reporting using approved formats, the key topics covered include BACHIC governance of data reporting and release, data ownership and control, reporting only of aggregate (de-identified) information, timing of reports, contents of reports, the process for report review and approval, data quality and integrity, the handling of special information requests, and data analysis/research agreements.

Supplementary Documents

None applicable.

General Policies

- BACHIC is the governing body for purposes of data reporting and release.*
- Data ownership is determined locally by each participating CoC.*
- Each participating CoC controls the local data it submits. However, each participating CoC understands that once its local data are in the RHINO database, they cannot be removed.*
- Each participating CoC retains the right to opt out all or a part of its local data from RHINO reporting. However, each participating CoC also understands that such an opt-out decision would reduce the quality and value of regional data and thus will not take such a decision lightly.*
- Only de-identified data will be reported and released (meaning distributed beyond the BACHIC membership) from RHINO. This means that only aggregate statistics (with client identifiers removed) will be released and that no data that can be used to identify a homeless person will be released.*
- RHINO reports will serve regional purposes (per the Vision and Benefits).*

- *RHINO reports will be regionally representative, objective, accurate, and fair.*
- *All reporting is subject to the availability of funding.*

Procedures

a. BACHIC Governance of Data Reporting and Release

- *BACHIC will meet as needed to make governance decisions regarding data reporting and release from RHINO.*
- *BACHIC may from time to time create a committee or committees to handle specific activities relating to RHINO data reporting and release. The work and decisions of such a subordinate committee or committees is subject to the approval of BACHIC.*
- *Neither the project lead agency (Community Technology Alliance), nor any data analyzing organization, will produce reports, share information, or disclose data for anyone other than BACHIC, unless otherwise directed by BACHIC.*

b. Data Ownership and Control

- *If a participating CoC is considering opting out its data from a RHINO data report, it must notify BACHIC and the project lead agency via the listserv as soon as is reasonable under the circumstances and provide in the listserv notification specific reasons for an opt-out decision.*
- *Any CoC considering opting out its data from a RHINO report will negotiate in good faith with BACHIC to find a solution that will allow inclusion of its local data in the report.*

c. Only De-Identified Aggregate Data will be Released

- *All RHINO reports and other data releases will be checked carefully to ensure they contain only de-identified data.*
- *All client identifiers, or any other information that could reasonably be used to identify a particular person, will be removed before a RHINO report or data are released.*

d. Contents of RHINO Data and Reports

Initial Phase

- *The initial type of report developed will be a regional demographic summary report.*
- *The format and contents of regional demographic summary reports will be determined by BACHIC, in consultation with the RHINO lead agency.*
- *Regional demographic statistics will be presented using pie charts and bar graphs as determined by BACHIC.*

Ongoing Operation

- *The format and contents of all RHINO reports will be determined by BACHIC, in consultation with the RHINO lead agency.*
- *The contents of future RHINO reports may include, but are not limited to region-wide aggregate data, subregional aggregate data, aggregate data by program type (e.g., emergency shelter), CoC comparative data, regional homeless migration or cross-county service utilization patterns or trends, patterns of chronic homelessness, longitudinal reports, outcomes analyses, reports combined with other data sources, analytical reports, and other statistics needed to better understand regional homelessness.*

e. Timing of Reports

Initial Phase

- *The initial type of report—regional demographic summary reports—will be prepared and released quarterly. The specific statistics to be included will be determined by BACHIC in accordance with the procedures above.*

Ongoing Operation

- *The timing of additional future report types will be determined by BACHIC.*

f. Process for Review, Approval, and Release of Reports

Design and Review of New Reports

- *The process for the review, approval, and release of all new report formats will be conducted by BACHIC in consultation with the RHINO lead agency. In this capacity, BACHIC will:*
 - *Define data questions and report needs.*
 - *Review and approve the format of reports.*
 - *Approve the final release of data and reports.*
- *BACHIC will directly review any new specific report formats (including the initial regional demographic summary reports referred to above) for the first two consecutive reporting periods.*
- *Approval of new report formats can occur in BACHIC meetings or (for efficiency purposes) via the BACHIC listserv (with the draft report attached and a specified reasonable deadline for review, approval, and comment).*
- *Participating CoCs will not disclose draft RHINO reports or data. Draft reports or data will remain confidential and be labeled “Confidential Draft.”*
- *Reports are approved by BACHIC by group consensus. A decision by consensus requires a quorum of a minimum of 51 percent of participating CoCs.*
- *Reports may not be published until BACHIC has approved publication. “Published” means that the report or data are available to BACHIC members for participating CoC use and are a part of the public domain.*
- *Once BACHIC has approved publication, the RHINO lead agency will transmit reports electronically in password-protected format only to the BACHIC representatives for each participating CoC.*
- *BACHIC as a group will determine how published reports will be strategically targeted for distribution beyond internal CoC use.*

Ongoing Production of Approved Reports

- *Continued BACHIC approval for ongoing report format (that have been directly reviewed for two quarters) will be assumed, unless there is an apparent data anomaly or extremity or a specific objection is raised and communicated to the RHINO lead agency with sufficient time prior to release of a planned report. If there is an apparent data anomaly, extremity, or specific objection, the*

report must be brought to BACHIC for approval before it is published.

g. Regional Data Quality and Integrity

- *Each participating CoC is responsible for the quality of local data submitted to RHINO.*
- *The value of regional reports depends largely upon the quality of the data included. BACHIC has the responsibility for setting data quality standards applicable to RHINO reports, such as the minimum number of contributing CoCs and the maximum allowable null value for specific data elements.*
- *Participating CoCs understand that the credibility of regional reports will depend largely upon the extent to which they are regionally representative, objective, accurate, and fair. BACHIC members will keep these concerns in the forefront of all review and consideration of regional data and reports.*
- *All regional reports and data will identify the participating CoCs, time period covered, the percentage of data completeness (regionally aggregated), and other relevant data quality conditions.*
- *All regional reports will contain a section detailing any known data limitations.*

h. Handling of Third-Party Report Requests

- *All third-party requests or demands for RHINO data or reports, whether made to an individual, organization, CoC, or the RHINO lead agency, must be in writing and transmitted immediately to BACHIC. BACHIC is responsible for consideration and decisions related to the request or demand. No third-party requests or demands for data or reports may be granted without prior approval from BACHIC.*
- *The project lead agency will immediately notify BACHIC of any third-party requests or demands for RHINO data that it receives.*
- *Notwithstanding the above, the project lead agency may make such RHINO data disclosures that may be required by law and will not be held responsible or liable for such data disclosures. However, prior to such a release, the project lead agency will first diligently pursue a resolution to the request or demand that eliminates, or*

reduces to the maximum extent possible, the need for any data disclosure.

i. Data Analysis/Research Agreements

- *BACHIC may from time to time determine that use and disclosure of RHINO data for research or academic purposes is regionally beneficial.*
- *Such uses and disclosures require a prior written research agreement that meets the standards for such agreements included in the HUD HMIS Data and Technical Standards, including all confidentiality and security protections included therein.*
- *All research agreements must be in writing and approved by BACHIC.*

8. Glossary of Acronyms & Terms

Glossary of Acronyms & Terms of Art as Used in These Policies and Procedures

Term	Definition
<i>Anonymous client</i>	<i>A client record where personal identifying information (PII) fields, such as name and Social Security Number, are not filled in or are filled in an “anonymous” value, preventing identification of the client. This is typically because the client has not given consent for entry of personal information into HMIS.</i>
<i>Bay Area</i>	<i>The 11-county region bordering on the San Francisco and Monterey Bays.</i>
<i>“Chronically” homeless</i>	<i>A homeless individual adult with a disability who has been homeless for at least 1 year or four times in the past 3 years.</i>
<i>Common business practice</i>	<i>Practices that are generally recognized as fair and appropriate by information technology communities.</i>
<i>Continuum of Care (CoC)</i>	<i>A HUD-recognized planning approach and strategy, covering a geographic area, for assisting homeless families and individuals to become permanently housed and self-sufficient. Each Bay Area CoC corresponds geographically with a county.</i>
<i>Comma-separated value (CSV) specification or schema</i>	<i>A computerized format that allows the sharing of data among different data systems using sets of simple text files, with data elements in a specific order and separated by commas. The HUD CSV Schema allows the sending of HMIS data elements from one data system to another. The HUD HMIS Standards require that CoCs be capable of exporting HMIS data in a CSV format.</i>
<i>Data export</i>	<i>The process of transmitting data from one data system to another, typically using a specific data-sharing format, such as a CSV or XML format. HUD has created CSV and XML formats for HMIS use.</i>
<i>Data integration</i>	<i>The merger of data from two or more data systems to produce a larger data set.</i>
<i>Data mapping</i>	<i>The system for documenting how specific data values in an exporting data system (in this case an HMIS) are to be matched to the allowable data values of the importing data system (in this case RHINO).</i>
<i>Data preparation</i>	<i>The collecting, formatting, cleaning, and validating of data for a particular use, in this case for export.</i>
<i>Data receipt</i>	<i>The acceptance into the importing data system of a data set, in the required format, from the exporting data system.</i>
<i>Data transfer or transmission</i>	<i>See “data export” above.</i>
<i>Data warehouse</i>	<i>A repository of data from more than one data source created to facilitate data analysis and/or some other data-related function.</i>
<i>De-duplication</i>	<i>A process for identifying and eliminating or matching duplicate records in a data system, in this case for eliminating or matching records of specific homeless persons in order to achieve an unduplicated regional homeless count and more accurate regional statistics.</i>

<i>Granularity</i>	<i>The relation of elements in a data system as typically measured by level of detail or time. Finer granularity has greater analytical capability, e.g., monthly homeless data can tell you more about the changes in homeless needs over a year than can twice yearly data.</i>
<i>Extensible Markup Language (XML) specification or schema</i>	<i>A computerized format that allows the sharing of data among different data systems within a specific structured format. The HUD XML Schema allows the sending of HMIS data elements from one data system to another.</i>
<i>“Null” value</i>	<i>An empty data field, i.e., where none of the possible values have been selected. Significant null values can reduce or undermine the validity of HMIS and regional homeless statistics.</i>
<i>Personal Protected Information (PPI)</i>	<i>Data elements requiring special confidentiality and security protections because they identify or can be used to identify a particular person. According to the HUD HMIS Standards, PPI includes the following Universal Data Elements: name, Social Security Number, date of birth, ZIP Code of last permanent address, unique personal identification number, and program identification number.</i>
<i>Regional Unique Identifier (RUID)</i>	<i>A scrambled or “hashed” code inserted into client records that allows for the de-duplication of the clients, even where PPI has otherwise been removed. In this case, the RUID allows for de-duplication of client records across the 11 CoCs.</i>
<i>Secure Shell 2 (SSH2)</i>	<i>A security protocol for logging onto a remote server. SSH provides a 128-bit encrypted session for transferring files and executing server programs. Also serving as a secure client/server connection for applications such as database access and e-mail. SSH2 is a more advanced version of the protocol.</i>