PIC – Next Generation (PIC – NG) - Overview



U.S. DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Industry Day - April 2017

Rationale For Change

- PIC/IMS developed in 1999 2000
 - Developed on Windows NT, Windows XP wasn't released until October
 2001
 - Requires developers with different skills than for PASS/NASS/EIV/VMS
- Accuracy of 50058 information
 - Approximately 1.3 million 50058 require resubmission each year
 - Significant time between data input and data validation
- Availability
 - 2016, 10 days below 80% availability, and PIC was only 96% available
- Integration with PHA applications
 - Custom/Different interfaces for 50058, inventory management
 - Difficult/Impossible to integrate PIC information into the PHA's application

Vision

Create an enterprise ready G2B solution to:

- Improve the quality, availability, and delivery of information supporting
 HUD affordable housing programs
- Reduce administrative burden for PHA and HUD staff
- Provide HUD with an enterprise data collection solution for affordable housing information such as:
 - Section 8 and Low Rent Public Housing Tenant Information 50058
 - New public housing developments
 - Demolition and Disposition of Public Housing properties
 - Inventory of Public Housing units and buildings
 - Operating Fund 52722/23 (future)
 - Request for Tenancy Approval 52517 (Future)
 - UPCS-V Physical Condition
 - Financial Statements, FDS

PHA Issues with PIC/IMS

- PHAs interact with other parts of HUD and the US government
- Many PHAs use multiple vendors to run their properties, often due to mixed-finance
- Form 50058 error correction takes an average of 1 hr/error- costing approximately 1.3 million hrs/yr
- Voiding records in PIC/IMS has a significant effect in the accounting portion of PHA software
- Not all tenants have a social security number
- Some gaps exist in the vendor software for PHA actions in PIC
- PHA applications may capture information not transmitted to PIC/IMS
 - Reasons for moving out
 - HUD form HUD-52517 Request for Tenancy Approval

HUD Issues with PIC/IMS

- PIC/IMS application developed in 1999-2000
 - Does not conform to Enterprise Architecture standards
 - Costly to maintain, requires different developer skill set
- No enhancements to PIC since 2007
 - -300+ outstanding enhancements requests
- Burdensome to PHAs to provide accurate information
 - No validation of information prior to submission
 - Contract with vendors to support PIC/VMS input often required
 - Batched data along with fatal errors creates heavy administrative burden
 - Enter VMS data manually, 30 days behind schedule, and is duplicate data
- No system design flexibility to accommodate change
 - Program Funding
 - Rental Assistance Demonstration

PIC-NG Approach

Stakeholder involvement

More than 90% of PIC information comes from PHAs

Software development partnership between REAC and OCIO

- OCIO Infrastructure, Enterprise Architecture, and Information Security
- REAC Federal software development team
- Cloud application
- Layered architecture to prevent vendor software lock in

Development methodology

AGILE- Incremental software delivery with increasing functionality

PIC-NG Progress

Outreach

- Working with PHAs and their software vendors to ensure feedback on Web Service and transition needs
- Website for project status
 - https://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing /systems/pic/pihinfocntrnextgen

Software Development

- OCIO have provided REAC-IT with a cloud-based environment
- REAC-IT and Enterprise Architecture team deploying and configuring the standard software platform
- Federal software developers teams
- Agile tools for development
- Collaboration tools for stakeholder in

PIC-NG Solution

- PHA users work in their own systems, PHA systems stream information to and from PIC-NG in the background
- Use industry standard interfaces for PHAs applications to stream information to and from HUD
- Validation in real-time against HUD information, significantly reduce fatal edits and PHA administrative burden
- Simplified user access, removes need to align PHA application security with WASS application security
- Ease of data correction, removes PHA accounting issues
- PHAs are the authorative data source for tenant and physical inventory information

PIC-NG Solution Approaches

Security

- Userid/Password for individual users
- Digital Certificates for individual users
- Digital Certificates for PHA System to PIC-NG

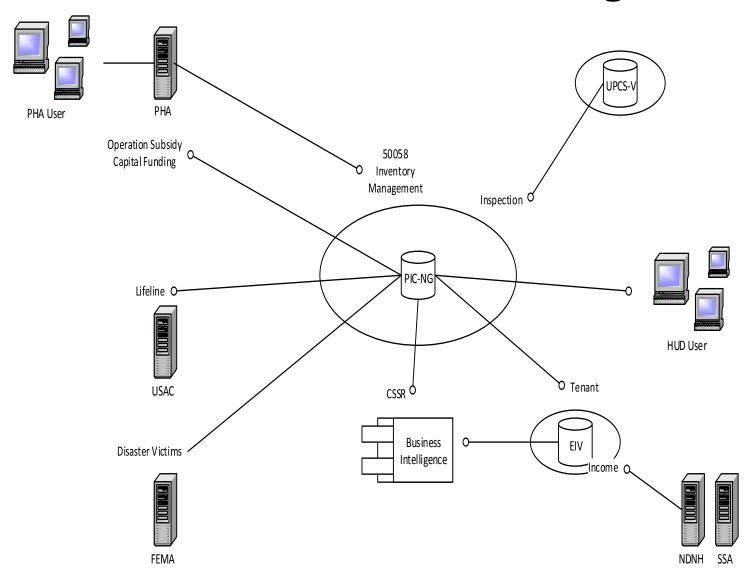
Real time Interface

- Synchronous, vendor application can call PIC-NG to validate each section/portion of the 50058 and return any errors
- Information returned can be used in the PHAs application
- Significantly reduces the time between data input and data validation

Queued Interface

- Asynchronous submit to a queue and back ground processes later
- Services to show the status of a submission

PIC-NG – Solutions in Progress



PIC-NG – Solutions in Progress

- IMS/PIC
 - FEMA
 - Office of Native American Programs VASH
 - Potential FRS tool replacement
 - FCC / USAC Lifeline Program
 - EIV Business Intelligence Tools
 - PHA Executive Compensation
 - OPSUB 52722/23
 - CSSR Reports

PIC-NG Solution – FEMA

- Computer Matching Agreement between REAC and FEMA
 - Disaster victims, FEMA can verify housing assistance in real time
 - System to system using web services
 - Digital certificate for authentication
 - End to end encryption

DEMONSTRATION

VASH https://pictest.eastus2.cloudapp.azure.com/pic ng web/



VASH01

Home

Organization Profile

Tribal VASH Form ▼

Reports ▼

Tribal HUD-VASH



Home

Grantee Name: Yakama Nation HA

Available Grants

55IH5318320

55IH3818701

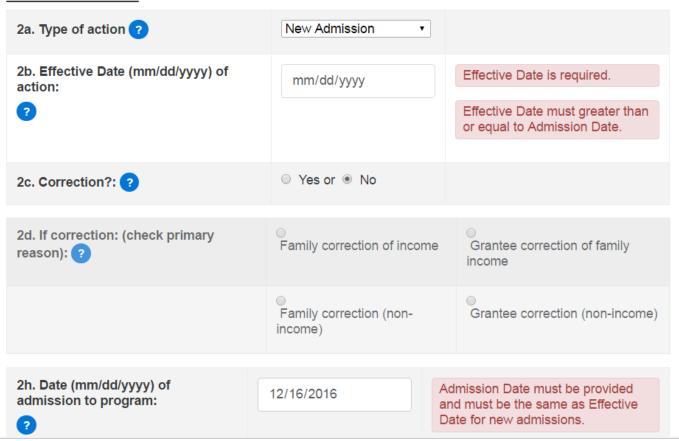
Messages:

PIC-NG System messages of the day

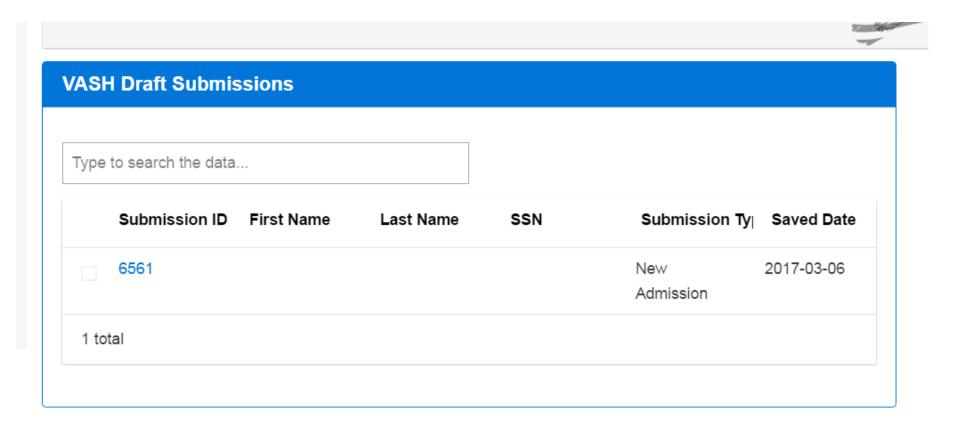
Tribal HUD-VASH

Grantee Name: Yakama Nation HA
Grant Number: 55IH3818701

Section 2: Action



| | | Tribal HUD-VASH | | 2000 |
|---|----------|---|-----------------|-------|
| | | You have successfully submitted you | r application × | Triba |
| | Tribal I | Your Submission ID: 6565 | | |
| | Grant Nu | | Exit | |
| | Section | | seu vouchers | |
| | 12h. C | Owner Name ? | test | |
| n | 12i. O | wner TIN/SSN ? | 123123 | |
| | 12k. R | ent to Owner ? | 1 | |
| | Rent Ca | Iculation | | |
| | 12u. R | tental Assistance Expected Payment Amount (RAP) | 1 | |
| | ? | | 1 | |



PIC-NG Solution – USAC

What is Lifeline?



Monthly discount on phone & broadband service

Subscribers prove eligibility through participation in qualifying program or demonstrating income at or below 135% of federal poverty guideline

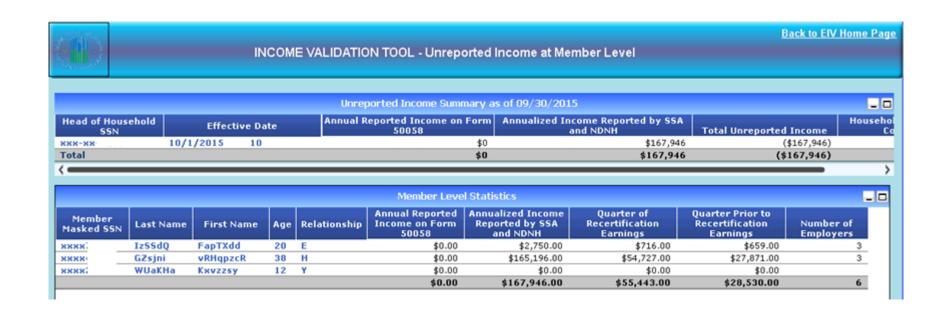
Available in every state, territory, commonwealth & on Tribal lands

13 million U.S. households participate in the federal Lifeline program

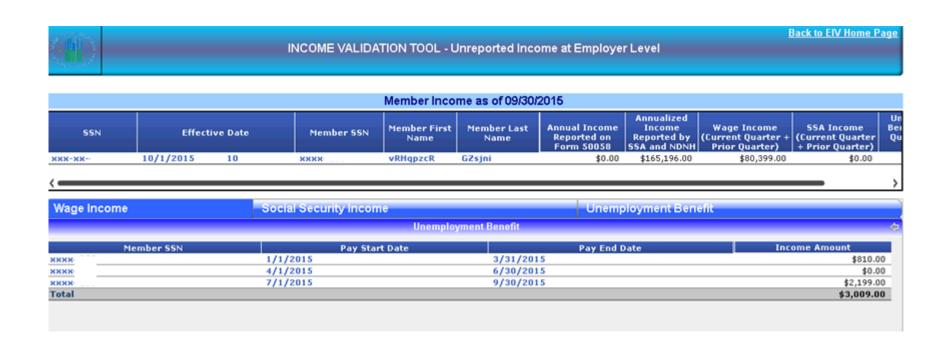
© 2016 Universal Service Administrative Co. I Lifeline Program

- https://microstrategydev.hud.gov/mstrc/servlet/mstrWeb?evt=2048001&src=mstrWeb.2048001&visMode=0¤tViewMedia=1&documentI D=EE5A65954EF4AB470F85CB815DD19A3D&server=HWVALAD1925&Project=PIH_EIV&port=0&share=1
- HEIV01

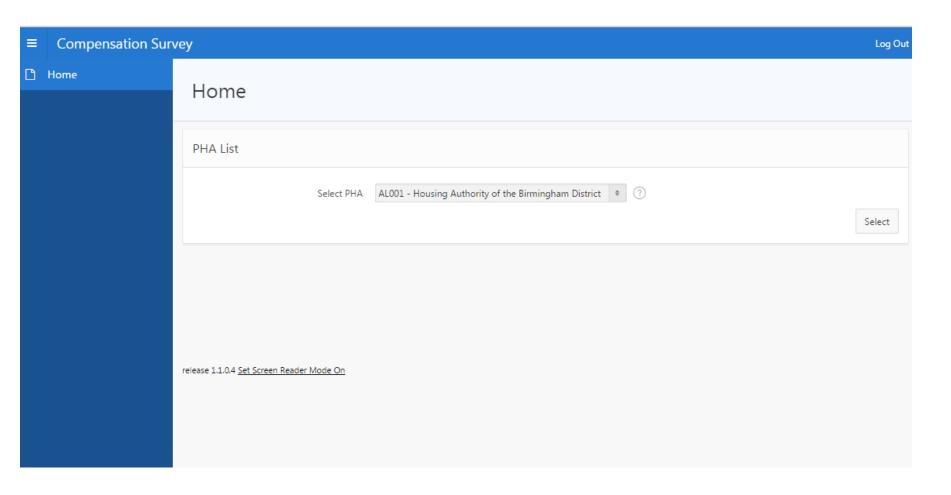




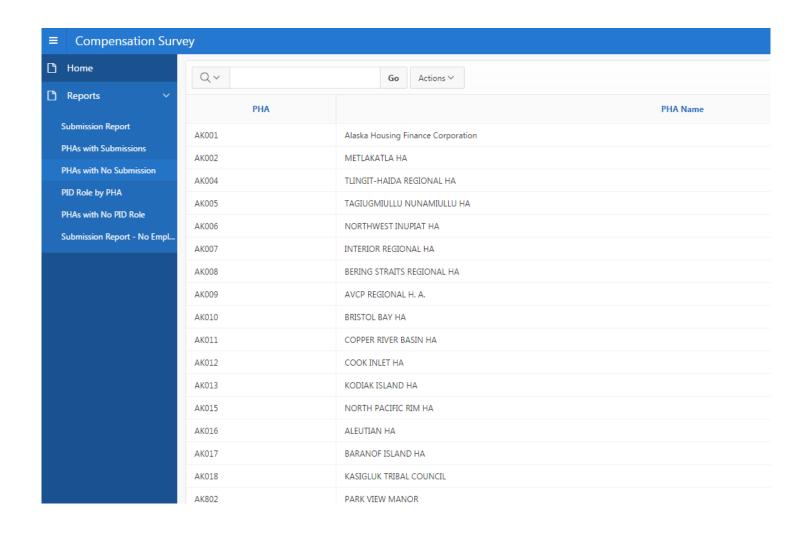




- http://hwvandp4692.hud.gov/dokuwiki/doku.php?id=apex_workspace_environments
- MOPF02 PHA
- MOPF04 HUD
- Development

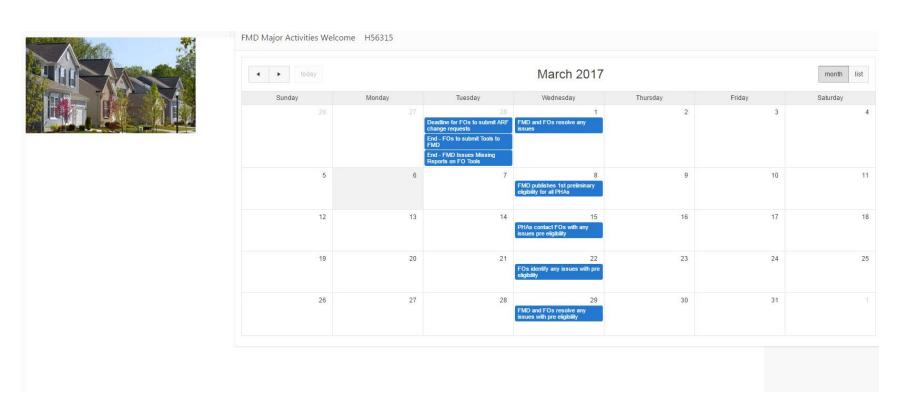


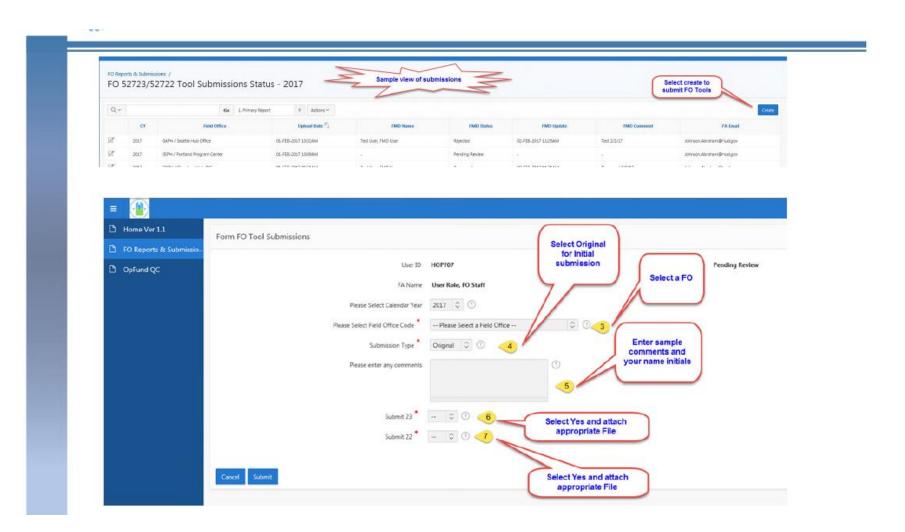
| | Section I: PHA Information | | | | | | | | | | | |
|---------|----------------------------|--|--------------------------|--|---|---|---|--|---|--|--|---|
| | | | | | | | | | Inst | ructions | | |
| | | (A) PHA Cod | e AL001 | | | | | Joe Schmo | | | | |
| | | (B) Name of PHA | A* Housing | Authority of the Bi | irmingham District | t | | | | | | |
| | (0 |) PHA Fiscal Year Er | nd 06/30 | | | | | | | | | |
| | (D) This PHA had r | no employees in 201 | 15 | | | | | | | | | |
| | | | | | | | | | | | | |
| (| E) This PHA is mana | (E) This PHA is managed by another PHA or other entity | | | | | | | | | | |
| | or other entity | | | | | | | | | | | |
| | | or other entit | у | | | | | | | | | |
| Section | on II: Calenda | | · | nsation Data | | | | | | | | |
| Section | on II: Calenda Box 1 | | · | nsation Data Box 4 | Box 5 | Вох б | Box 7 | Box 8 | Box 9 | Box 10 | Box 11 | Box 1 |
| Section | | r Year Employ | ee Compen | | Box 5 Base Salary from Section 8 & 9 funds (\$) | Box 6 Bonus compensation from Section 8 & 9 funds (\$) | Box 7 Incentive and other compensation from Section 8 & 9 funds (\$) | Box 8 Base Salary from NON - Section 8 & 9 funds (\$) | Box 9 Bonus compensation from NON - Section 8 & 9 funds (\$) | Box 10 Incentive and other compensation from NON - Section 8 & 9 funds (\$) | Box 11 Total (Box 5 + Box 6 + Box 7 + Box 8 + Box 9 + Box 10) | Box 1 Complet Check: (I = Box Yes/h |
| Section | Box 1 Employee | r Year Employ Box 2 First Name, | ee Compen Box 3 Employee | Box 4 Total Compensation as reported on the PHA employee's 2015 IRS Form W-2 | Base Salary from Section 8 & 9 funds | Bonus compensation from Section 8 & 9 funds | Incentive and other compensation from Section 8 & 9 funds | Base Salary from NON - Section 8 & 9 | Bonus compensation from NON - Section 8 & 9 | Incentive and other compensation from NON - Section 8 & 9 | Total (Box 5 + Box 6 + Box 7 + Box 8 + Box 9 + | Complet Check: (I = Box |

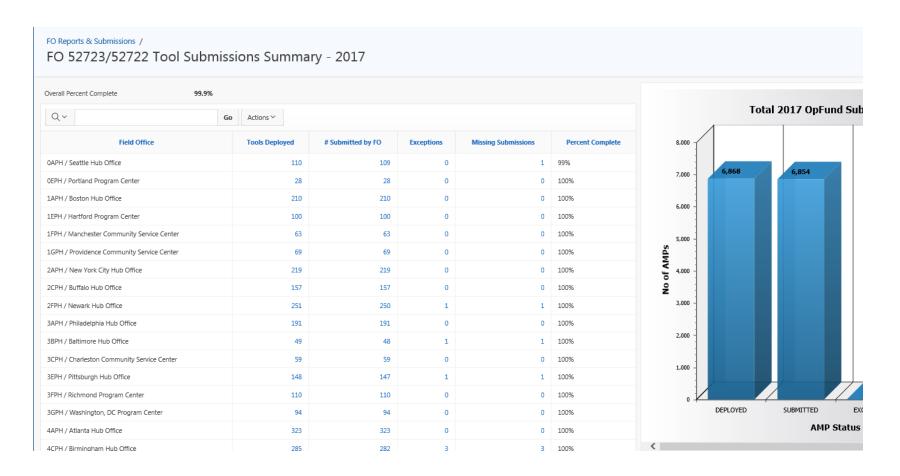


• http://hwvandp4692.hud.gov/dokuwiki/doku.php?id=apex_workspace_environments

• Ability to see what HUD is expecting to be provided







PIC-NG Solution CSSR

- https://microstrategydev.hud.gov/mstrc/servlet/mstrWeb?evt=2048026&src=mstrWeb.2048026&subscriptionID=ABC6F18411E7027C00000080E FD58D04&server=HWVALAD1925&Project=PIH%20Data%20Mart&port=0&share=1
- HDCG00

PIC-NG Solution CSSR



Community Service or Self-Sufficiency Requirement Report

| | | | Residents between ages 18 and age 61 | Residents between ages | | | | | | | | | | | | í |
|----------------|--------------------|--------------|---|---|--|-------------|---------------------------------------|---------------------------------|---------------|------------------|---|------------|----------------------------|-------------|--|--|
| РНА | Total Number of | Number of | student - | 18 and age 61 inclusive, not live-in aide and not full time student - | the Form HUD-50058 = 1 ("yes") - | = 1 ("yes") | the Form HUD-50058 = 2 ("no") - | Form HUD-50058 = 2 ("no") | ("pending") - | 3 ("pending") | Line 3q on the Form HUD-50058 = 4 ("exempt") | | HUD-50058 = 5 ("n/a") - | 5 ("n/a") - | the Form HUD-50058 is blank or 0 - | Line 3q on the Form HUD-50058 is blank or 0 - |
| | Households | | | Percent | Count | - Percent | Count | - Percent | Count | - Percent | - Count | PErcent | Count | Percent | Count | Percent |
| AL001 | 4,449 | 10,281 | 4,326 | 42% | 939 | 22% | 465 | 11% | 200 | 5% | 2,713 | 63% | 0 | 0% | 9 | 0% |
| AL002 | 1,761 | 3,510 | 1,302 | 37% | 224 | 17% | 196 | 15% | 49 | 4% | 833 | 64% | 0 | 0% | 0 | 0% |
| AL004 | 597 | 1,297 | 593 | 46% | 10 | 2% | 31 | 5% | 21 | 4% | 531 | 90% | 0 | 0% | 0 | 0% |
| AL005 | 753 | 1,582 | 653 | 41% | 35 | 5% | 10 | 2% | 33 | 5% | 575 | 88% | 0 | 0% | 0 | 0% |
| AL006 | 1,098 | 2,681 | 1,010 | 38% | 170 | 17% | 30 | 3% | 0 | 0% | 803 | 80% | 0 | 0% | 7 | 1% |
| AL007 | 552 | 1,121 | 491 | 44% | 136 | 28% | 42 | 9% | 0 | 0% | 313 | 64% | 0 | 0% | 0 | 0% |
| AL008 AL009 | 485 | 1,125 | 468 89 | 42% | 189 | 40% | 0 | 0% | 7 | 1% 15% | 272 70 | 58% | 0 | 0% | 0 | 0% 0% |
| AL009 AL010 | 92 | 199 | 232 | 45% 37% | 5 | 6% 2% | 1 0 | 1% 0% | 2 | 15% | 225 | 79% 97% | 0 | 0% 0% | 0 | 0% |
| AL010 | 248 216 | 631 421 | 185 | 44% | 18 | 10% | 0 | 0% | 11 | 6% | 156 | 84% | 0 | 0% | 0 | 0% |
| AL011 | 258 | 465 | 245 | 53% | 88 | 36% | 38 | 16% | 7 | 3% | 112 | 46% | 0 | 0% | 0 | 0% |
| AL012 | 83 | 136 | 69 | 51% | 4 | 6% | 0 | 0% | 1 | 1% | 64 | 93% | 0 | 0% | 0 | 0% |
| AL013 | 298 | 608 | 271 | 45% | 2 | 1% | 0 | 0% | 113 | 42% | 156 | 58% | 0 | 0% | 0 | 0% |
| AL047 | 1,566 | 3,564 | 1,456 | 41% | 328 | 23% | 141 | 10% | 6 | 0% | 981 | 67% | 0 | 0% | 0 | 0% |
| AL048 | 445 | 777 | 289 | 37% | 11 | 4% | 29 | 10% | 160 | 55% | 89 | 31% | 0 | 0% | 0 | 0% |
| AL049 | 711 | 1.286 | 652 | 51% | 34 | 5% | 5 | 1% | 58 | 9% | 555 | 85% | 0 | 0% | 0 | 0% |
| AL051 | 128 | 214 | 102 | 48% | 12 | 12% | 0 | 0% | 0 | 0% | 90 | 88% | 0 | 0% | 0 | 0% |
| AL052 | 278 | 529 | 258 | 49% | 1 | 0% | 0 | 0% | 18 | 7% | 239 | 93% | 0 | 0% | 0 | 0% |
| AL053 | 345 | 692 | 356 | 51% | 33 | 9% | 6 | 2% | 70 | 20% | 247 | 69% | 0 | 0% | 0 | 0% |
| AL054 | 349 | 706 | 359 | 51% | 12 | 3% | 9 | 3% | 92 | 26% | 246 | 69% | 0 | 0% | 0 | 0% |
| AL055 | 56 | 101 | 55 | 54% | 0 | 0% | 1 | 2% | 2 | 4% | 52 | 95% | 0 | 0% | 0 | 0% |
| AL056 | 237 | 387 | 172 | 44% | 11 | 6% | 0 | 0% | 21 | 12% | 140 | 81% | 0 | 0% | 0 | 0% |
| AL057 | 501 | 851 | 399 | 47% | 28 | 7% | 50 | 13% | 9 | 2% | 312 | 78% | 0 | 0% | 0 | 0% |
| AL058 | 127 | 185 | 91 | 49% | 14 | 15% | 0 | 0% | 4 | 4% | 73 | 80% | 0 | 0% | 0 | 0% |
| AL059 | 192 | 319 | 153 | 48% | 3 | 2% | 15 | 10% | 2 | 1% | 133 | 87% | 0 | 0% | 0 | 0% |
| AL060 | 142 | 256 | 130 | 51% | 37 | 28% | 2 | 2% | 6 | 5% | 85 | 65% | 0 | 0% | 0 | 0% |
| AL062 | 282 | 666 | 265 | 40% | 15 | 6% | 0 | 0% | 4 | 2% | 246 | 93% | 0 | 0% | 0 | 0% |
| AL063 | 148 | 211 | 97 | 46% | 1 | 1% | 0 | 0% | 1 | 1% | 95 | 98% | 0 | 0% | 0 | 0% |
| AL064 | 90 | 128 | 63 | 49% | 8 | 13% | 4 | 6% | 5 | 8% | 46 | 73% | 0 | 0% | 0 | 0% |
| Δ1.065 | 41 | 93 | 41 | 44% | 3 | 7% | 0 | 0% | 0 | 0% | 3.8 | 93% | 0 | n% | n | n% |

PIC-NG Solution CSSR



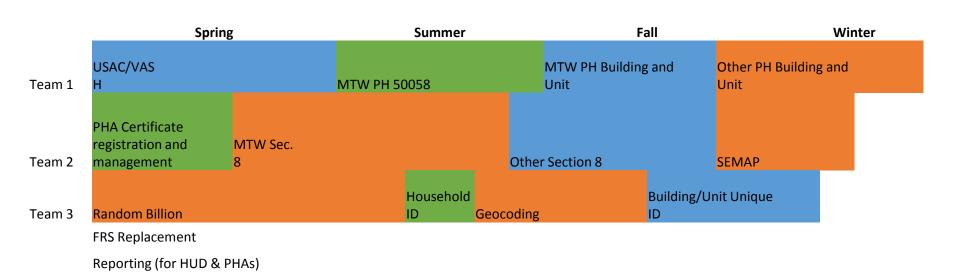
CSSR - Non-Compliant Tenants

| PHA Code | Development Number | Unit number | Head of Household SSN | Member SSN | Member Last Name |
|----------|--------------------|-------------|-----------------------|------------|---------------------|
| NY005 | NY005013410 | | XXX-XX-f | XXX-XX- | AMVTI |
| NY005 | NY005013410 | | XXX-XX-5 | XXX-XX- | JEMBBY |
| NY005 | NY005013410 | | XXX-XX-{ | XXX-XX- | VERIVM |
| NY005 | NY005013590 | | XXX-XX-1 | XXX-XX- | XMVCIV |
| NY005 | NY005013590 | | XXX-XX-1 | XXX-XX- | NFYS |
| NY005 | NY005013590 | | XXX-XX-8 | XXX-XX- | ZG |
| NY005 | NY005013590 | | XXX-XX-7 | XXX-XX- | CZEGFT |
| NY005 | NY005013590 | | XXX-XX-3 | XXX-XX- | TFYAMU |
| NY005 | NY005013590 | | XXX-XX-4 | XXX-XX- | BMSVIMZY |
| NY005 | NY005013590 | | XXX-XX-5 | XXX-XX- | KYBYZ |
| NY005 | NY005015310 | | XXX-XX-7 | XXX-XX- | BIUUEZGTYZ |
| NY005 | NY005015310 | | XXX-XX-7 | XXX-XX- | VYUMJY AYZTMBRY |
| NY005 | NY005015310 | | XXX-XX-7 | XXX-XX- | QEBBEMAU |
| NY005 | NY005015310 | | XXX-XX-1 | XXX-XX- | FEIVVY |
| NY005 | NY005015310 | | XXX-XX-4 | XXX-XX- | ZSZIN JI RIZTSVM |
| NY005 | NY005015310 | | XXX-XX-2 | XXX-XX- | XSTZMA |

PIC-NG Roadmap

| Current State | Mid Spring 201 | 7 Early Summer 2017 | Late Summer 20 | 17 Fall 2017 | Winter 2017 |
|---|--|---|---|---|---|
| Business Functionality • PHA Pilot • 50058 streaming • Business to Government Security | ONAP VASH 50058 file 50058 validation Tenant Reporting PII Minimization Tenant Validation Lifeline | MTW Section 8 50058 streaming 50058 file 50058 pre validation | Section 8 Only PHAs 50058 streaming 50058 file 50058 pre validation 50058 validation Tenant Reporting PII Minimization SEMAP | Section 8 Only and Combined PHAs 50058 50058 file 50058 pre validation 50058 validation Tenant Reporting PII Minimization SEMAP | • All PHAs • 50058 streaming • 50058 file • 50058 validation • 50058 pre validation • Tenant Reporting • PII Minimization • SEMAP • Low Rent Inventory • Demolition |

PIC-NG Next Steps



PIC-NG Next Steps

- Demonstration Environment
 - Available to all PHAs and Software Vendors
 - Collaboration boards
- PIC Test Like Environment
 - Ability to test with real data
 - Validate data conversion
- Production Migration
 - Groups of PHAs or PHA by PHA?

PIC-NG

Questions or Comments?

Please email PICNG_REAC@HUD.gov

https://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/systems/pic/pihinfocntrnextgen https://portal.hud.gov/hudportal/HUD?src=/program_offices/public_indian_housing/systems/pic/pihinfonextgendevlinfo