# Exchange Conformance Checklist

The Checklist below contains a list of rules and guidelines from the Exchange Network XML Design Rules and Conventions (DRCs) and the Exchange Design Rules and Conventions (EDRCs). The checklist is not inclusive of all rules and guidelines; rather it only includes the items that have historically been the source of most issues with submitted exchange documentation packages. Exchange developers are expected to review and comply with the rules and guidelines in the DRCs and EDRCs.

Exchange developers must include a completed checklist with their exchange documentation package. In cases where "no" was indicated for a checklist item, an explanation must be provided on the Exceptions section at the bottom of this worksheet.

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| --- | --- | --- | --- | --- | --- | --- |
|  | Exchange: **Integrated Compliance Information System – National Pollutant Discharge Elimination System (ICIS-NPDES)** | |  |  |  |  |
|  | Version: 5**.0 Full Batch Release** | |  |  |  |  |
|  | Date Prepared: **September 11, 2012** | | |  |  |  |
|  |  | |  |  |  |  |
| **Compliance with XML Design Rules and Conventions** | | | | | | |
|  | **XML Tag Naming Conventions** | | | Yes | No | N/A |
|  | GD1-1 | All schemas are valid and conformant to W3C technical specifications. | | **X** |  |  |
|  | GD3-1 | All element and datatype names are in UpperCamelCase. | | **X** |  |  |
|  | GD3-3 | All attribute names are in lowerCamelCase. | |  | **X** |  |
|  | GD3-6 | All schema construct names are devoid of underscores, periods or dashes. | | **X** |  |  |
|  | GD3-8 | All tag names unique throughout the schema. | | **X** |  |  |
|  | GD3-12 | All lowest-level element tag names follow UN/CEFACT naming standards consisting of Object Class, Property Class, and Representation Term. | |  | **X** |  |
|  | GD3-17 | All element tag names are in singular form. | |  | **X** |  |
|  | GD3-A | All datatype tag names end in "Type" or "DataType". | |  | **X** |  |
|  |  |  | |  |  |  |
|  | **Elements and Attributes** | | | Yes | No | N/A |
|  | SD3-1 | All elements are declared as global. | |  |  |  |
|  | SD3-9 | Attributes, if implemented, are only used to store metadata. | | **X** |  |  |
|  |  |  | |  |  |  |
|  | **Namespaces** | | | Yes | No | N/A |
|  | SD4-2 | All schema constructs namespace qualified. | | **X** |  |  |
|  | SD4-A | All schemas use the proper Exchange Network namespace naming convention. | | **X** |  |  |
|  | SD4-D | The schema namespace only contains the exchange's major version number. | | **X** |  |  |
|  |  |  | |  |  |  |
|  | **Schema Configuration and Documentation** | | | Yes | No | N/A |
|  | SD5-R | Schemas have been modularized into default, message, component, and shared schemas. | | **X** |  |  |
|  | GD2-A | The schema package includes an "index.xsd" schema that includes each root schedule for the exchange. | | **X** |  |  |
|  | SD5-A | The schema uses Shared Schema Components where appropriate for the targeted business processes. | |  | **X** |  |
|  | SD5-34 | Each schema file includes the standard schema header documentation. | |  | **X** |  |
|  |  |  | |  |  |  |
|  | **Schema Versioning** | | | Yes | No | N/A |
|  | SD5-F | If the schema represents a minor version increment from a previous schema, the only changes the addition of new optional elements or constructs. | | **X** |  |  |
|  | SD5-H | If the schema represents a minor version increment from a previous schema, it implements an identical namespace as it's predecessor. | |  |  | **X** |
|  | SD5-K | The schema file names, XSD version attribute, header documentation, and namespace all contain matching version information. | | **X** |  |  |
|  | GD2-C, D, E | Schema file names match the naming rules for message, component, and local shared schemas. | |  | **X** |  |
|  |  |  | |  |  |  |
|  | **Information Association and Uniqueness** | | | Yes | No | N/A |
|  | SD6-4 | If KEY and KEYREF are used, the constructs have been tested to ensure they are implemented properly. | |  |  | **X** |
|  |  |  | |  |  |  |
| **Compliance with Exchange Design Rules and Conventions** | | | |  |  |  |
|  | **General Exchange Design** | | | Yes | No | N/A |
|  | XD1-1 | The exchange is prescribed an exchange identifier in the form of a single term or acronym. | | **X** |  |  |
|  | XD1-2 | The exchange identifier used consistently throughout the schema and exchange documentation. | | **X** |  |  |
|  |  |  | |  |  |  |
|  | **Exchange Development and Publishing** | | | Yes | No | N/A |
|  | XD2-6 | The exchange package includes all required components including XML schema, schema conformance report, DET, FCD and one or more valid instance files. | | **X** |  |  |
|  | XD2-9 | If the package is a new version of an existing schema, a schema change log is included in the package. | | **X** |  |  |
|  | XD2-10 | The exchange package include a description of use and rejection of SSCs in the exchange schema. | |  |  | **X** |
|  |  |  | |  |  |  |
|  | **Exchange Component Versioning** | | | Yes | No | N/A |
|  | XD3-1, 2, 3 | If the package is for a new version of an exchange, the appropriate versioning principles are applied. | | **X** |  |  |
|  | XD3-4 | All components of the exchange package share a matching version number. | | **X** |  |  |
|  | XD3-5 | All documents in the exchange follow the file name requirements. | | **X** |  |  |
|  | XD3-6, 7 | If the exchange package contains any draft components, they are labeled as draft in the component name. | |  |  | **X** |
|  | XD3-9 | If applicable, all Query and Solicit data service names unique from previous versions of the exchange. | |  |  | **X** |
|  |  |  | |  |  |  |
|  | **Exchange Documentation** | | | Yes | No | N/A |
|  | XD4-1 | Is the Flow Configuration Document based on the most recent Network-approved FCD template? | |  | **X** |  |
|  | XD4-5 | Does the FCD document the steps for a new partner to implement and participate in the exchange? | | **X** |  |  |
|  | XD4-6 | Does the FCD indicate which operations and/or services are required or optional for a partner to implement? | | **X** |  |  |
|  | XD4-7 | Does the FCD list the specific meaning of each of the applicable GetStatus responses, if applicable? | | **X** |  |  |
|  |  |  | |  |  |  |
|  | **Query and Solicit Services** | | | Yes | No | N/A |
|  | XD5-1, 2 | All data service names follow the data service naming guidelines. | |  |  | **X** |
|  | XD5-4 | If any data service accepts XML-formatted parameters, the XML schema is documented and included in the exchange package. | |  |  | **X** |
|  | XD5-7, 8 | The FCD fully documents the parameter names, data types, occurance, wildcard behavior and return schema for each data service. | |  |  | **X** |
|  | XD5-9 | The FCD indicates what constitutes a "row" for any service that is made available as a Query. | |  |  | **X** |
|  |  |  | |  |  |  |
|  | **Exchange Network Header** | | | Yes | No | N/A |
|  | XD6-1 | The Header is implemented in all Submit operations. | |  | **X** |  |
|  | XD6-6 | The FCD documents allowable values for the Header operation attribute along with a precise description of how each operation affects payload processing. | |  |  | **X** |
|  | XD6-10 | If the Header is used, the FCD describes whether multiple payloads are supported and how they must be structured. | |  |  | **X** |
|  | XD6-13 | If the Header is used, it is the latest Network-approved Header. | |  |  | **X** |

### Checklist Exceptions

|  |  |
| --- | --- |
| **DRC/EDRC ID** | **Reason for Exception** |
| GD3-A | For elements used by schema put into production on or before September 1st, 2011 these changes will not be made because it will require significant changes and impact several states. For elements used solely by schema placed into production after September 1st, 2011 these changes will cause significant delays in implementing ICIS Full Batch and we will not make these changes. |
| GD3-3 | ICIS Root schema has an attribute named “Operation” that has been used in Production since June 2008, before this standard was put into place. To change it now will cause several states and the NetDMR tool to be modified to generate XMLs using “operation” as an attribute. Because a change of this magnitude will cause significant delays in implementing ICIS Full Batch and this is in a top level schema that is used by all XML file validations, we will not make this change to elements that have been in production since February 28th, 2011. |
| GD3-4 | We have added clarifying language to the DET for elements with little known acronyms as element names. |
| GD3-5 | For elements used by schema put into production on or before September 1st, 2011 these changes will not be made because it will require significant changes and impact several states. For elements used solely by schema placed into production after September 1st, 2011 these changes will be made. |
| GD 3-8 | Elements for database fields that cannot be blanked out are given a datatype that ends with “TypeBase”. All other elements are given a datatype that is an extension of base called “Type” that allows an asterisk to indicate the blanking out of database fields. This naming convention has been used in Production since June 2008, before this standard was put into place. |
| GD3-12 | For elements used by schema put into production on or before September 1st, 2011 these changes will not be made because it will require significant changes and impact several states. For elements used solely by schema placed into production after September 1st, 2011 these changes will cause significant delays in implementing ICIS Full Batch and we will not make these changes. |
| GD3-17 | For elements used by schema put into production on or before September 1st, 2011 these changes will not be made because it will require significant changes and impact several states. For elements used solely by schema placed into production after September 1st, 2011 these changes will be made. |
| GD3-18 | In several cases ICIS UDFs are named similar but actually have different facets or if two share a facet experience has taught us that one may be changed in the future to support a regional preference, so we prefer to provide separate tags for them and number them to match the field in our ICIS tables. |
| GD3-19 | For elements used by schema put into production on or before September 1st, 2011 these changes will not be made because it will require significant changes and impact several states. For elements used solely by schema placed into production after September 1st, 2011 these changes will be made. |
| SD 5-A | DSIMB performed an analysis of the shared schema components in September 2006 and determined it would take 6 months of full time work to modify the existing schema to incorporate them and determined it may increase the size of the schema exponentially to the point of interfering with schema validation. DSIMB opted not to incorporate shared schema components to avoid a significantly delay in the ICIS-NPDES Batch processing code development. |
| SD 5-34 | ICIS-NPDES uses its own header within an XML submission file loosely based upon the Exchange Network header that allows one XML to contain one or more different data families. This header also requires one ICIS ID used to segregate the results of one zipped submission file containing multiple XMLs into different reports by ICIS ID for easier handling by state staff. This has been used in Production since June 2008, before this standard was put into place. To change it now would cause a major rework of ICIS parsing code, schema, state schema generation code and take valuable functionality away from ICIS. |
| GD2-E | ICIS-NPDES uses “Common” instead of “Shared” for its local shared schema. This has been used in Production since June 2008, and follows an older standard before this standard was put into place. |
| XD 4-1 | The ICIS-NPDES FCD has been used in Production since June 2008, and follows an older standard before this standard was put into place. It has minor updates for Node 2.0 and to provide steps on how states can download their processing results. |
| XD 4-3 | Due to the size and amount of ICIS-NPDES schema, XML Spy cannot generate the entire schema documentation so PDFs of this documentation are being provided separate from the FCD. |
| XD 6-1 | ICIS-NPDES uses its own header within an XML submission file loosely based upon the Exchange Network header that allows one XML to contain one or more different data families. This header also requires one ICIS ID used to segregate the results of one zipped submission file containing multiple XMLs into different reports by ICIS ID for easier handling by state staff. This has been used in Production since June 2008, before this standard was put into place. To change it now would cause a major rework of ICIS parsing code, schema, state schema generation code and take valuable functionality away from ICIS. |
| Other | All enumerated values present in the schema are static values within our ICIS application as well and have been since 2004 with the exception of the TransactionType enumeration which is unique to ICIS Batch processing.  Although Design Rules & Conventions were in place since September 2003, the 2010 version is quite different from the 2003 version. In order to start development of our schema OEI’s Director at the time (Kim Nelson) agreed to not bind ICIS to any standards that came into effect after 2003. |