

NHN Completeness Levels Main Characteristics
(Applicable per NHN Work Unit)

Subject	CL1	CL2	CL3	CL4	*Notes
	Hydro Network	Waterbody Definition	Data Continuity	Toponymy Upgrade	
Network Linear Flows (NLF)	Network Linear Flows must be present*	<i>Network Linear Flows must be present*</i>	Primary Network Linear Flows must be complete*	<i>Primary Network Linear Flows must be complete*</i>	*Some <i>Network Linear Flows</i> may be missing*
	The <i>Level Priority</i> attribute value may be <i>Unknown</i>	The <i>Level Priority</i> attribute value may be <i>Unknown</i>	The <i>Level Priority</i> attribute value may not be <i>Unknown</i>	The <i>Level Priority</i> attribute value may not be <i>Unknown</i>	
	<i>NLF</i> continuity is not validated	<i>NLF</i> continuity is not validated	<i>NLF</i> continuity is validated	<i>NLF</i> continuity is validated	
	The <i>Flow Direction</i> attribute value may be <i>Unknown</i>	The <i>Flow Direction</i> attribute value may be <i>Unknown</i>	The <i>Flow Direction</i> attribute value for <i>Primary NLF</i> and <i>Observed Secondary NLF</i> may not be <i>Unknown</i>*	The <i>Flow Direction</i> attribute value for <i>Primary NLF</i> and <i>Observed Secondary NLF</i> may not be <i>Unknown</i> *	*The <i>Flow Direction</i> attribute value for <i>Inferred Secondary NLF</i> and <i>Observed Secondary NLF</i> within <i>Waterbodies</i> is not validated
	<i>NLF</i> digitizing direction is not validated	<i>NLF</i> digitizing direction is not validated	<i>Primary NLF</i> and <i>Observed Secondary NLF</i> digitizing direction is validated*	<i>Primary NLF</i> and <i>Observed Secondary NLF</i> digitizing direction is validated*	*The digitizing direction for <i>Inferred Secondary NLF</i> and <i>Observed Secondary NLF</i> within <i>Waterbodies</i> is not validated
Single Line Watercourses, Waterbodies and Banks	Single Line Watercourses, Waterbodies and Banks must be present	<i>Single Line Watercourses, Waterbodies and Banks must be present</i>	<i>Single Line Watercourses, Waterbodies and Banks must be present</i>	<i>Single Line Watercourses, Waterbodies and Banks must be present</i>	
	The <i>Water Definition</i> attribute value may be <i>Unknown</i>	The <i>Water Definition</i> attribute value may not be <i>Unknown</i>*	The <i>Water Definition</i> attribute value may not be <i>Unknown</i> *	The <i>Water Definition</i> attribute value may not be <i>Unknown</i> *	*At the least the distinction between <i>Lakes</i> , <i>Watercourse</i> for <i>Waterbodies</i>
<i>Littoral</i>	The <i>Littoral</i> may not be present	The <i>Littoral</i> must be present	The <i>Littoral</i> must be present	The <i>Littoral</i> must be present	
Manmade Hydrographic Entities	Manmade Hydrographic Entities must be present*	Manmade Hydrographic Entities must be present*	Manmade Hydrographic Entities must be present*	Manmade Hydrographic Entities must be present*	*At the least <i>Dams</i> and <i>Dikes/Levees</i>
Islands	Islands must be present*	<i>Islands must be present*</i>	Islands must be present	<i>Islands must be present</i>	*Some <i>Islands</i> may be missing (ex. along the Work Unit Limit)
	The <i>Coastal Island</i> attribute value may be <i>Unknown</i>	The <i>Coastal Island</i> attribute value may not be <i>Unknown</i>	The <i>Coastal Island</i> attribute value may not be <i>Unknown</i>	The <i>Coastal Island</i> attribute value may not be <i>Unknown</i>	
Toponyms (geographical names)	Hydrographic phenomenon toponyms are present*	Hydrographic phenomenon toponyms are present*	Hydrographic phenomenon toponyms are present*	Hydrographic phenomenon toponyms are present and up-to-date	*Some toponyms may be missing
	Toponyms are present as attributes on hydrographic elements or on <i>Named Features</i>	Toponyms are present as attributes on hydrographic elements or on <i>Named Features</i>	Toponyms are present as attributes on hydrographic elements when present or on <i>Named Features</i>*	Toponyms are up-to-date and present as attributes on hydrographic elements when present or on <i>Named Features</i>*	*A <i>Named Feature</i> is present only if a correspondence with an hydrographic element was not possible
	The toponymic source may be a nonofficial source*	The toponymic source may be a nonofficial source*	The toponymic source may be a nonofficial source*	The toponymic source must be official and up-to-date	*Ex.: The National Topographic Data Base (NTDB)
	A <i>Named Feature</i> 's geometry may not coincide with the extent of the corresponding toponymic phenomenon*	A <i>Named Feature</i> 's geometry may not coincide with the extent of the corresponding toponymic phenomenon*	A <i>Named Feature</i> 's geometry may not coincide with the extent of the corresponding toponymic phenomenon*	A <i>Named Feature</i>'s geometry must coincide with the extent of the corresponding toponymic phenomenon*	*Ex.: A point type <i>Named Feature</i> naming an area type <i>Bay</i>
	Toponymic continuity is not validated on the hydro network	Toponymic continuity is not validated on the hydro network	Toponymic continuity is validated on the hydro network	Toponymic continuity is validated and up-to-date on the hydro network	
Events	Manmade and Obstacle Events generated from the geometric intersection of elements* must be present**	<i>Manmade and Obstacle Events generated from the geometric intersection of elements* must be present**</i>	<i>Manmade and Obstacle Events generated from the geometric intersection of elements* must be present**</i>	<i>Manmade and Obstacle Events generated from the geometric intersection of elements* must be present**</i>	*Intersection of a <i>Hydro Obstacle Entity</i> or a <i>Manmade Hydro Entity</i> and a network linear element **Projected events may also be present
	Flow Property Events must be present	<i>Flow Property Events must be present</i>	<i>Flow Property Events must be present</i>	<i>Flow Property Events must be present</i>	
Delimiters and Hydro Junctions	<i>Delimiters and Hydro Junctions</i> corresponding to existing hydro elements must be present	<i>Delimiters and Hydro Junctions</i> corresponding to existing hydro elements must be present	<i>Delimiters and Hydro Junctions</i> corresponding to existing hydro elements must be present	<i>Delimiters and Hydro Junctions</i> corresponding to existing hydro elements must be present	
NHN Work Unit Limit	The coherence of hydrographic elements with the WU Limit is not validated	The coherence of hydrographic elements with the WU Limit is not validated	The coherence of hydrographic elements with the WU Limit is validated	The coherence of hydrographic elements with the WU Limit is validated	