Data Quality Planning

Name	Organization	Website	Reach
Uniform Federal Policy for Quality Assurance Project Plans – Training Materials	U.S Department of Defense	https://www.epa.gov/fedfac/uniform-federal-policy-quality-assurance-project-plans-training-materials	National
Systematic Planning	U.S Department of the Navy	DON Sampling and Analysis Plan (SAP)	National
How EPA Manages the Quality of its Environmental Information	US Environmental Protection Agency (USEPA)	https://www.epa.gov/quality	National
Guidance for Quality Assurance Project Plans, EPA QA/G-5	USEPA	https://www.epa.gov/quality/guidance-quality-assurance-project-plans-epa-qag-5	National
Guidance on Systematic Planning Using the Data Quality Objectives Process, EPA QA/G-4	USEPA	https://www.epa.gov/quality/guidance-systematic-planning-using-data-quality-objectives-process-epa-qag-4	National
Agency-wide Quality Program Documents	USEPA	https://www.epa.gov/quality/agency-wide-quality-program-documents	National
Managing the Quality of Environmental Data at EPA Region 1	USEPA Region 1	https://www.epa.gov/quality/managing-quality-environmental-data-epa-region-1	Regional
US EPA Region 2 Guidance for the Development of Quality Assurance Project Plans for Environmental Monitoring Projects	USEPA Region 2	https://www.epa.gov/quality/us-epa-region-2-guidance-development-quality-assurance-project-plans-environmental	Regional
EPA Region 3 Quality Assurance Project Plans	USEPA Region 3	https://www.epa.gov/quality/epa-region-3-quality-assurance-project-plans	Regional
Region 4 Quality Assurance Project Plan (QAPP) Tool Box	USEPA Region 4	https://www.epa.gov/brownfields/region-4-quality-assurance-project-plan-qapp-tool-box	Regional
Managing the Quality of Environmental Data at EPA Region 5	USEPA Region 5	https://www.epa.gov/quality/managing-quality-environmental-data-epa-region-5	Regional

Managing the Quality of Environmental Data at EPA Region 6	USEPA Region 6	https://www.epa.gov/quality/managing-quality-environmental-data-epa-region-6	Regional
Managing the Quality of Environmental Data at EPA Region 7	USEPA Region 7	https://www.epa.gov/quality/managing-quality-environmental-data-epa-region-7	Regional
Managing the Quality of Environmental Data at EPA Region 8	USEPA Region 8	https://www.epa.gov/quality/managing-quality-environmental-data-epa-region-8	Regional
Region 9 Wetlands Quality Assurance Project Plan Guidance and Template	USEPA Region 9	https://www.epa.gov/quality/region-9-wetlands-quality-assurance-project-plan-guidance-and-template	Regional
Quality Assurance Project Plans for Tribes in Region 10	USEPA Region 10	https://www.epa.gov/r10-tribal/quality-assurance-project-plans-tribes-region-10	Regional
Quality Assurance	Alaska Department of Environmental Conservation	https://dec.alaska.gov/water/water-quality/quality-assurance/	State
Quality Assurance Documents	Alaska Division of Air Quality	https://dec.alaska.gov/air/air-monitoring/quality-assurance-plans/	State
Quality Assurance	Connecticut Department of Energy and Environmental Protection	https://portal.ct.gov/DEEP/About/Quality-Assurance	State
Data Submission Guidance	Illinois Environmental Protection Agency	https://www2.illinois.gov/epa/topics/water-quality/watershed-management/resource-assessments/Pages/guidance.aspx	State
Quality Assurance Project Plan Template Insturctions	Indiana Department of Environmental Management	https://www.in.gov/idem/nps/quality-assurance-project-plan-template-instructions/	State
Quality Assurance Project Plans	Massachusetts Department of Environmental Protection	https://www.mass.gov/lists/quality-assurance-project-plans	State
Minnesota Pollution Control Agency Quality Assurance Project Plan Guidance	Minnesota Pollution Control Agency	https://www.pca.state.mn.us/sites/default/files/p-eao2-13.pdf	State
Underground Storage Tank and Petroleum Remediation Quality Assurance Program Plan	Minnesota Pollution Control Agency	https://www.pca.state.mn.us/sites/default/files/p-eao2-04.pdf	State

Toxic Substances Control Act; Polycholrinated Biphenyl Inspection Program; Quality Assurance Program Plan	Minnesota Pollution Control Agency	https://www.pca.state.mn.us/sites/default/files/p-eao2-08.pdf	State
Data Quality Management	Missouri Department of Natural Resources	https://dnr.mo.gov/waste-recycling/business-industry/guidance-technical-assistance/data-quality-management	State
Quality Assurance Project Plan Technical Guidance	New Jersey Department of Environmental Protection	https://www.nj.gov/dep/srp/guidance/srra/quality_assurrance_project_plan_guidance.pdf	State
Quality Assurance and Quality Control of Water Quality Data	New York Department of Environmental Conservation	https://www.dec.ny.gov/chemical/23850.html	State
Quality Assurance Plans	South Carolina Department of Health and Environmental Control	https://scdhec.gov/quality-assurance-plans	State
UST Quality Assurance Program Plan	South Carolina Department of Health and Environmental Control	https://scdhec.gov/environment/land-waste/underground-storage-tanks/release-assessment-clean/quality-assurance	State
Quality Assurance Project Plans for Nonprofit Source Projects	Texas Commission on Environmental Quality	https://www.tceq.texas.gov/waterquality/nonpoint-source/nps-qapp	State
Quality Assurance and Monitoring Procedures for Surface Water Quality Monitoring	Texas Commission on Environmental Quality	https://www.tceq.texas.gov/waterquality/monitoring/swqm_guides.html	State
Air Quality Research: Quality Assurance	Texas Commission on Environmental Quality	https://www.tceq.texas.gov/airquality/airmod/project/quality-assurance	State
Texas Risk Reduction Program	Texas Commission on Environmental Quality	https://www.tceq.texas.gov/remediation/trrp/trrp.html	State
Guidelines for Preparing Quality Assurance Project Plans for Environmental Studies	Washington State Department of Ecology	https://apps.ecology.wa.gov/publications/documents/0403030.pdf	State
Quality Management Plan, 2020	Washington State Department of Ecology	https://apps.ecology.wa.gov/publications/documents/2003014.pdf	State

Data Quality Review

Name	Organization	Website	Reach
General Data Validation Guidelines	U.S. Department of Defense	https://denix.osd.mil/edqw/documents/documents/gen-data-validation-rev1/	National
Data Validation Guidelines Module 1: Data Validation Procedure for Organic Analysis by GC/MS	U.S. Department of Defense	https://denix.osd.mil/edqw/documents/documents/module-1/	National
Data Validation Guidelines Module 2: Data Validation Procedure for Metals by ICP-OES	U.S. Department of Defense	https://denix.osd.mil/edqw/documents/documents/module-2/	National
Data Validation Guidelines Module 3: Data Validation Procedure for Per- and Polyfluoroalkyl Substances Analysis by QSM Table B-15	U.S. Department of Defense	https://denix.osd.mil/edqw/documents/documents/module-3-data-validation/	National
Data Validation Guidelines Module 4: Data Validation Procedure for Organic Analysis by GC	U.S. Department of Defense	https://denix.osd.mil/edqw/documents/documents/module-4-data-val/	National
Superfund CLP National Functional Guidelines for Data Review	U.S. Environmental Protection Agency (USEPA)	https://www.epa.gov/clp/superfund-clp-national-functional-guidelines-data-review	National
Superfund CLP Analytical Services Guidance Documents	USEPA	https://19january2017snapshot.epa.gov/clp/superfund-analytical-services-guidance-documents_.html	National
Guidance on Environmental Data Verification and Data Validation	USEPA	https://www.epa.gov/quality/guidance-environmental-data-verification-and-data-validation	National
Environmental Data Review Program Guidance	USEPA Region 1	https://www.epa.gov/sites/default/files/2018-06/documents/r1-dr-program-guidance-june-2018.pdf	Regional

Region 2 Quality Assurance Guidance and Standard Operating Procedures	USEPA Region 2	https://www.epa.gov/quality/region-2-quality-assurance-guidance-and-standard-operating-procedures	Regional
EPA Region 3 Data Validation	USEPA Region 3	https://www.epa.gov/quality/epa-region-3-data-validation	Regional
EPA Region 4 Data Validation Standard Operating Procedures for Contract Laboratory Program Routine Analytical Services	USEPA Region 4	https://www.epa.gov/quality/epa-region-4-data-validation-standard-operating-procedures-contract-laboratory-program	Regional
Data Validation & Laboratory Quality Assurance for Region 9	USEPA Region 9	https://www.epa.gov/quality/data-validation-laboratory-quality-assurance-region-9	Regional
Conservation Division of Spill Prevention and Response Contaminated Sites Program	Alaska Department of Environmental Conservation	https://dec.alaska.gov/media/18665/quality-assurance-tech-memo-2019.pdf	State
Labaratory Data Review Checklist	Alaska Department of Environmental Conservation	https://dec.alaska.gov/media/20872/laboratory-data-review-check-list.docx	State
Laboratory Data Review Checklist for Air Samples	Alaska Department of Environmental Conservation	https://dec.alaska.gov/media/22791/laboratory-data-review-check-list-air-samples.docx	State
Quality Assurance and Quality Control	Connecticut Department of Energy and Environmental Protection	https://portal.ct.gov/DEEP/Remediation–Site-Clean-Up/Guidance/Quality-Assurance-and-Quality-Control	State
Data Quality Assessment and Data Usability Evaluation Techincal Guide	New Jersey Department of Environmental Protection	https://www.nj.gov/dep/srp/guidance/srra/data_qual_assess_guidance.pdf	State
DER-10, Technical Guidance for Site Investigation and Remediation	New York Department of Environmental Conservation	https://www.dec.ny.gov/docs/remediation_hudson_pdf/der10.pdf	State

Review and Reporting of COC Concentration Data under TRRP	Texas Commission on Environmental Quality	https://www.dec.ny.gov/docs/remediation_hudson_pdf/der10.pdf	State

Public Communications

Name	Organization	Website	Notes
Federal Enterprise Data Resources	Federal Government	Home | resources.data.gov	Guidance and tools on data management and standards
Care Principles	Global Indigenous Data Alliance	CARE principles	Data management and consideration principles for indigenous data
Global Indigenous Data Alliance	Global Indigenous Data Alliance	Global Indigenous Data Alliance	Main GIDA website with additional resources
Plain Writing Act of 2010	U.S. Government Publishing Office	Plain Writing Act of 2010	
Plain Language Training	Federal Government	Training | plainlanguage.gov	
Plain Language Resources	Federal Government	resources	
Plain Language Groups and Organizations	Federal Government	Groups and organizations | plainlanguage.gov	List of groups
IT Accessibility Laws and Policies	Federal Government	IT Accessibility Laws and Policies	Section 508 of the Rehabilitation Act of 1973
Making the Web Accessible	W3C	Web Accessibility Initiative (WAI) website	Additional reading and resources for web accessibility
Create Accessible Documents	Federal Government	Create Accessible Documents | Section508.gov	Guidance on making documents accessible for the web
The FAIR Guiding Principles for scientific data management and stewardship	Scientific Data Journal	The FAIR Guiding Principles for scientific data management and stewardship | Scientific Data (nature.com)	
Enabling FAIR Data Project	COPDESS	Enabling FAIR Data Project – COPDESS	
Go FAIR Initiative	GOFAIR	GO FAIR Initiative	Hosts forums, festivals, and builds community to implement FAIR data principles
ITRC's Risk Communication Toolkit	ITRC	Risk Communication Toolkit	Risk communication guidance by ITRC
The SALT Framework	USEPA	The SALT Framework | US EPA	Risk communication guidance from USEPA
Crisis and Emergency Risk Communication Toolkit	CA Department of Public Health	Crisis and Emergency Risk Communication Toolkit	Risk communication guidance from CA Dept of Health
AirNow	USEPA	AirNow	Houses U.S. air quality index

CA Communities Environmental Health Screening Tool: CalEnviroScreen 4.0	CA Office of Environmental Health Hazard Assessment	CalEnviroScreen 4.0 | OEHHA	Screening methodology to help identify communities that are disproportionately burdened by multiple sources of pollution
My Water Quality – Is it safe to swim in our waters?	State of CA	CA Safe to Swim	Real-time monitoring for coastal water quality
GeoTracker	CA State Water Resources Control Board	GeoTracker	Data mangement system and interactive map service for sites that impact or have the potential to impact water quality in CA with an emphasis on groundwater
IQAir	IQAir	IQAir	Global air quality awareness with international partnerships
Purple Air	Purple Air	Purple Air	Citizen science real-time air quality monitoring network
EIM – Environmental Information Management Database	State of Washington Department of Ecology	Washington EIM	Environmental data management system for state of Washington that contains environmental monitoring data collected by state scientists and partners
U.S. Governments's open data portal	Federal Government	Data.gov	Open data portal for the US
Digital Civic Engagement for Government	Granicus	Granicus	Service for governments to send digital communications to citizens
Reilly Tar & Chemical Superfund Site Community Involvement Plan	USEPA	Reilly Tar and Chemical Superfund Site Community Involvement Plan	Example community engagement plan
CA Tribal Relations Program	CA Environmental Protection Agency	California Native American Tribal Relations | CalEPA	List of tribal consultation policies from multiple CA agencies
What is a User Story	Visual Paradigm	Visual Paradigm	Information on user stories and how to create and use them

Data Exchange and Valid Values

Name	Category	Organization	Website	Notes	Reach
USEPA Water Quality Exchange (WQX) Domain Values	EDMS, Federal	US Enviromental Protection Agency (USEPA)	https://www.epa.gov/waterdata/storage-and-retrieval-and-water-quality-exchange-domain-services-and-downloads	Valid values lookup.	National
EPA Superfund: Electronic Data Submission for Multi-Regions, EDD	EDMS, Federal	US Enviromental Protection Agency (USEPA)	https://www.epa.gov/superfund/epa-superfund-electronic-data-submission-multi-regions-edd	EDD guidance.	National
EPA Data Standards	EDMS, Federal	US Environmental Protection Agency (USEPA) as part of the Environmental Data Standards Council (EDSC)	https://www.epa.gov/data-standards	EPA data standards for consistently defined and formatted data elements and sets of data values	National

CalEPA Environmental Data Exchange Network (CEDEN) Lookup Lists	EDMS, State	California Enviromental Protection Agency (CalEPA)	http://ceden.org/CEDEN_Checker/Checker/LookUpLists.php	Valid values lookup; good for some methods	State
California SWRCB GeoTracker Search for Valid Values	EDMS, State	California State Water Resources Control Board (SWRCB)	https://geotracker.waterboards.ca.gov/searchvvl.asp	Valid values lookup lists.	State
California SWRCB GeoTracker Electronic Submittal of Information	EDMS, State	California State Water Resources Control Board (SWRCB)	https://www.waterboards.ca.gov/ust/electronic_submittal/index.html	EDD guidance.	State
Delaware DNREC EQuIS Data Processor (EDP) Format	EDMS, State	Delaware Department of Natural Resources and Environmental Control (DNREC)	https://earthsoft.com/products/edp/edp-format-for-dnrec/	EDD and valid value guidance.	State
Maine Environmental and Geographic Analysis Database (EGAD)	EDMS, State	Maine Department of Envirmental Protection	https://www.maine.gov/dep/maps-data/egad/	EDD and valid value guidance.	
New York State DEC EQuIS Data Processor (EDP) Format	EDMS, State	New York State Department of Enviromental Conservation (DEC)	https://earthsoft.com/products/edp/edp-format-for-nysdec/	EDD and valid value guidance.	State
Washington Ecology Environmental Information Management System (EIM) Help Center	EDMS, State	Washington State Department of Ecology (Ecology)	https://apps.ecology.wa.gov/eim/help/	EDD guidance; Valid value lookup for bigger lists, see template help for shorter lists	State
Washington Ecology Accredited Labs	Labs	Washington State Department of Ecology (Ecology)	https://apps.ecology.wa.gov/laboratorysearch/Default.aspx	Shows accredited labs and what they are accredited for. Current accreditation only.	State
National Environmental Methods Index (NEMI)	Methods	National Water Quality Monitoring Council, US Geological Survey (USGS), USEPA	https://www.nemi.gov/	Great resource, but sometimes does not have current methods because they have to be “approved” first. Does not have historical methods.	National
SGS-AXYS Analytical Services	Methods	SGS-AXYS Analytical Services	https://www.sgsaxys.com/	We use many of their develomental methods for emerging contaminants. Message lab for method info, or talk to project manager.	Canada
Standard Methods for the Examination of Water and Wastewater	Methods	American Public Health Association (APHA), American Water Works Association (AWWA), and Water Environment Federation (WEF)	https://www.standardmethods.org/	Requires account to access. Good if you need to look at actual method.	National
USEPA Hazardous Waste Test Methods (SW-846)	Methods	USEPA	https://www.epa.gov/hw-sw846	Useful Methods Status Table (for versioning) that’s buried in the site, so linked here.	National

ASTM International Standards	Methods	ASTM International, West Conshohocken, PA	https://www.astm.org/	Good for determining versioning on standards.	Global
USEPA Environmental Measurement Collection of Methods	Methods	USEPA	https://www.epa.gov/measurements/collection-methods	Not searchable, but straight from the source.	National
The NELAC Institute (TNI) Laboratory Accreditation Management System (LAMS)	Methods/Parameters	The NELAC Institute (TNI)	http://lams.nelac-institute.org/	TNI codes for accreditation.	National
USEPA Selected Analytical Methods for Environmental Remediation and Recovery (SAM)	Methods	USEPA	https://www.epa.gov/homeland-security-research/sam	Good compilation of methods from different sources.	National
HACH company USEPA compliant methods	Methods	HACH Company, Loveland CO	https://www.hach.com/epa	Cross-walk of HACH methods to USEPA methods (so the USEPA method can be reported instead of an instrument model).	National
USEPA Substance Registry Services (SRS)	Parameters	USEPA	https://ofmpub.epa.gov/sor_internet/registry/substreg/	Try to use this when possible. Sometimes it does not have parameters, especially for emergent chemicals.	National
USEPA CompTox Chemicals Dashboard	Parameters	USEPA	https://comptox.epa.gov/dashboard/	Compilation of toxicology info sourced from many sites, databases, and sources, including US federal and state sources and international bodies. Not reviewed by USEPA.	National
CAS Scifinder	Parameters	American Chemical Society	https://www.cas.org/products/scifinder	Complete CAS registry. Paid resource that needs a license. Expensive.	National
CAS Common Chemistry	Parameters	American Chemical Society	https://commonchemistry.cas.org/	Free resource.	
PAN Pesticide Database	Parameters	Pesticide Action Network (nonprofit)	http://www.pesticideinfo.org/	Good for pesticides.	National
NIH PubChem	Parameters	National Institutes of Health (NIH)	https://pubchem.ncbi.nlm.nih.gov/	This is a go-to after USEPA SRS. In fact, it might be better.	National
USGS Parameter Codes	Parameters	USGS	https://help.waterdata.usgs.gov/codes-and-parameters/parameters	Methods and units combined with parameters.	National
CHEMINDEX	Parameters	Canadian Centre for Occupational Health and Safety	http://ccinfoweb.ccohs.ca/chemindex/search.html		Canada
NIST Chemistry Workbook	Parameters	National Institute of Standards and Technology (NIST) at US Department of Commerce	https://webbook.nist.gov/chemistry/		National
NIH ChemIDplus	Parameters	National Institutes of Health (NIH)	https://chem.nlm.nih.gov/chemidplus/chemidlite.jsp		National

Integrated Taxonomic Information System (ITIS)	Taxa	Partnership of Federal agencies (USGS, USEPA, NOAA, etc.)	https://www.itis.gov/advanced_search.html	Supposed to be the go-to resource for US, but is often not up to date.	National
Washington Flora Checklist	Taxa	University of Washington Herbarium	http://biology.burke.washington.edu/herbarium/waflora/checklist.php	For plants. More updated than ITIS. Has a name checker.	Regional
World Registry of Marine Species (WoRMS)	Taxa	Multi-organization/country. Based at Flanders Marine Institute, Belgium	http://www.marinespecies.org/aphia.php	Great resource. Incorporates many other databases like DiatomBase. Seems ahead of some US sources. Good comparison tool.	Global
AlgaeBase	Taxa	Multi-organization/country. Based in Galway, Ireland.	http://www.algaebase.org/	Good for algae.	Global
USGS BioData Taxonomic System	Taxa	USGS	https://my.usgs.gov/confluence/display/biodata/BioData+Taxonomy+Downloads	Downloads only. USEPA is big on this for WQX.	National
USDA PLANTS Database	Taxa	USDA National Resources Conservation Service	https://plants.usda.gov/	Good for plants	National
SCAMIT Taxonomic Database Tool	Taxa	Southern California Association of Marine Invertebrate Taxonomists	http://data.sccwrp.org/scamit/index.php	Pseudo searchable. Good for regional invertebrates.	Regional
Catalogue of Life	Taxa	Multi-organization/country	https://www.catalogueoflife.org/	Draws from a number of sources like ITIS. Better to use the sources themselves. Has a monthly search and annual checklist.	Global
University of Michigan Diatom Taxonomic References	Taxa	University of Michigan	http://umich.edu/~phytolab/GreatLakesDiatomHomePage/references/references.html	References only	National
USGS Diatoms and non-diatoms (soft-algae)	Taxa	USGS National Water Quality Assessment (NAWQA) program, EPA National Aquatic Resource Surveys (NARS), and Academy of Natural Sciences at Drexel University (ANS).	https://diatom.ansp.org/Taxa.aspx	Good for diatoms. Lists only, not up to date (2011). Shows NADED IDs.	National
Encyclopedia of Life (EOL)	Taxa	Multi-organization/country	http://www.eol.org/	Draws from a variety of sources. Better to use the sources themselves.	Global
Encyclopedia of Puget Sound (Washington)	Taxa	Puget Sound Institute at University of Washington	https://www.eopugetsound.org/species		Regional
FishBase	Taxa	Multi-organization/country. Based in Los Baños, Laguna, Philippines	http://www.fishbase.org/search.php		Global
MolluscaBase	Taxa	Multi-orginization/country. Based at Flanders Marine Institute, Belgium	http://www.molluscabase.org/		Global
Northwest Standard Taxonomic Effort (NWSTE)	Taxa	Pacific Northwest Aquatic Monitoring Partnership (PNAMP)	https://www.pnamp.org/project/northwest-standard-taxonomic-effort	Excel list. Out of date.	Regional

Geospatial Data

Name	Organization	Website
Spatial Data Collection Standards	Indiana Department of Environmental Management	https://www.in.gov/idem/resources/publications/spatial-data-collection-standards/
Information Systems / Resources / Standards	North Dakota Information Technology	https://www.gis.nd.gov/standards
Geographic Information Systems (GIS)	Washington Department of Ecology	https://ecology.wa.gov/Research-Data/Data-resources/Geographic-Information-Systems-GIS
Spatial Data	Minnesota Pollution Control Agency	https://www.pca.state.mn.us/data/spatial-data