



Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE



National Engineering Manual (NEM) WA Supplement Updates

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National Engineering Manual (NEM) Background – ENG Policy

- NEM is National Policy that must be followed
Directives: Title 210 – NEM 500
 - <https://directives.sc.egov.usda.gov/directive/24>
- Why does engineering have its own Manual?
Engineering practices have the potential, upon failure, to affect public health and safety and cause loss of life and significant property damage, depending on the size, location, and complexity of the work.



Supplements to NEM

- Each State can, and in some cases must supplement National Policy
 - Supplements can only be more restrictive than National Policy or provide additional clarifications.
 - Supplements must be approved by NHQ.
- Washington NRCS Webpage - Engineering
 - <https://www.nrcs.usda.gov/state-offices/washington/washington-engineering>
 - At the bottom of the page



WA Supplements to NEM

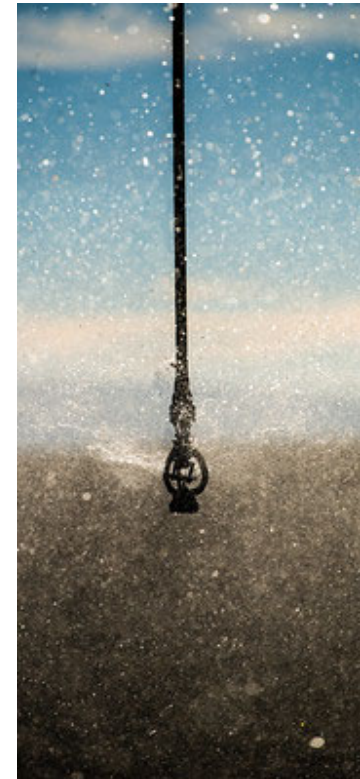
NEM	Part Title		National Date	Washington Supplement	Description of Supplement
500	Introduction	Subchapter A - General	June 2017	n/a	
501	Authorizations				<ul style="list-style-type: none"> Procedures for the Stamping of Plans Engineering JAA policy
		Subpart A - Review and Approval	June 2017	April 2021	
		Subpart B - Repair and Rehabilitation	June 2017	n/a	
		Subpart C - Variance and Changes	June 2017	n/a	
		Subpart D - Engineering Work on National Forests	June 2017	n/a	
		Subpart E - Assistance on Shore Erosion Control	June 2017	n/a	
503	Safety	Subpart A - Engineering Activities Affecting utilities	June 2017	TBD	<ul style="list-style-type: none"> Pending update 04/2025 Confined spaces policy Risk Assessment of ELJs, requires following USBR/USACOE large Wood Manual or an equivalent method
		Subpart B - Public Safety at Structure Sites	June 2017	January 2021	
		Subpart C - Safety During Geological Investigations	June 2017	TBD	<ul style="list-style-type: none"> WA Supplement Under Development
		Subpart D - Dam Safety	June 2017	n/a	
		Subpart E - Prohibited Technical Assistance	June 2017	n/a	

Currently WA has 21 Supplements. Most were updated in January 2018 due to the NEM update in June of 2017.



Recent Updates

- New State Conservation Engineer (SCE) – June 2024
 - Reviewing all WA State Supplements
 - Submitting to NHQ for official posting
- 5 updated Supplements and 1 new Supplement for review prior to posting.



Recent Updates

- **WA 501 Subpart A – Review and Approval**
 - Compliance of Engineering Work with Laws and Regulations
 - State and/or Local Laws may require Professional Engineer Stamp on designs
 - Engineering Job Approval Authority (EJAA)
 - SCE is required to develop State Policy on EJAA for Job Class I-V
 - Engineering Job Review
 - SCE is required to develop State Policy on reviewing internal NRCS engineering designs for Job Class I-V
 - Classification of Engineering Jobs
 - This is the developed Washington Skills Matrix Database that classifies engineering jobs into the different Job Classes.
- Very minimal updates to this supplement, some wording changes and clarifications.



Recent Updates

- **WA 503 Subpart A – Engineering Activities Effecting Utilities**
 - Call Before You Dig - 811
 - Supplement defines responsibilities for public and private utilities
 - Supplement has specific NRCS wording required for all NRCS designed engineering projects that have ground disturbing practices
 - Supplement describes documentation requirements if buried utilities are known to be in the vicinity.
- There were significant changes to this supplement to clarify when documentation is needed and to give flexibility to designers to approve other 811 wording if design is not an internal NRCS design.



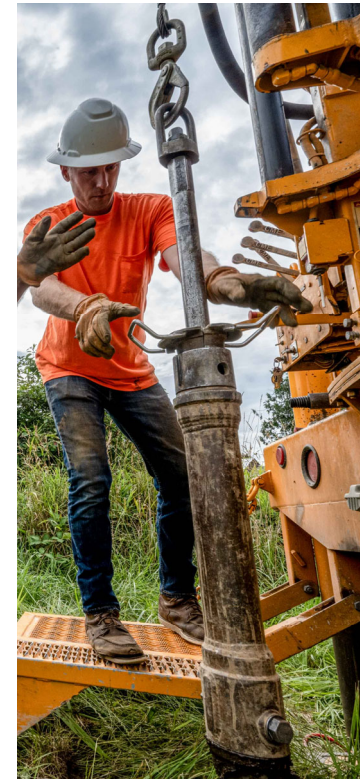
Recent Updates

- **WA 503 Subpart B – Public Safety at Structure Sites**
 - Confined Spaces
 - Supplement defines what is a confined space and requirements for NRCS staff to be working in a confined space.
 - Directly links to Washing State Laws
 - Risk Assessment of Engineering Log Jams and Large Woody Debris Structures
 - A risk assessment is required for all stream restoration projects that have log jams. The analysis determines the risk of the project to life, property and infrastructure.
- Very minimal updates to this supplement, some wording changes.



Recent Updates - NEW

- **WA 503 Subpart C – Safety During Geologic Investigations**
 - Safety Requirements for the Drill Rig
 - Provides minimum requirements for staff working in or around the drill rig. (i.e., first aid, hard hats, hearing protection etc.)
 - Provides limitations of drill rig operations due to weather and other hazards.
- New supplement to be added.



Recent Updates

- **WA 505 Subpart B – Procedures**

- Non – TSP Providers

- This is a required supplement that defines how Non-TSP providers work will be reviewed in WA.
 - The supplement describes functional review vs. technical review and when each is needed.

- Conservation Contractors

- This section of the supplement gives NRCS WA the ability to accept work from Certified Irrigation Designers (CID) for low hazard sprinkler systems projects.
 - It also lines out the review process for CIDs.

- Very minimal updates to this supplement, some wording changes.



Recent Updates

- **WA 506 Subpart A – Development and Distribution of Technical Materials**
 - WA NRCS Technical References
 - The supplement provides a list of the technical references that must be available for the State Office Engineering Staff, Area Office Engineering Staff and Field Offices.

- No changes to this supplement, just re-releasing.



Future Updates

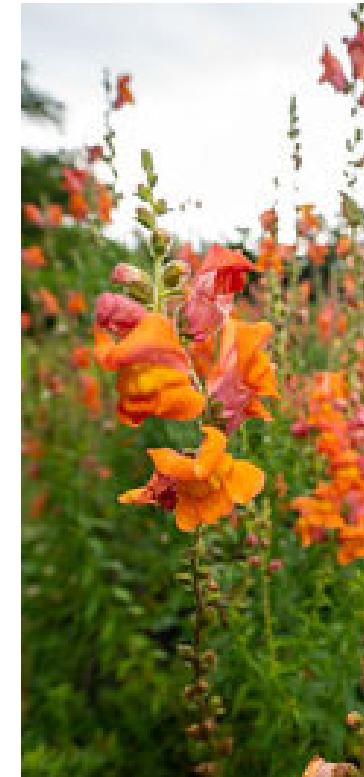
	materials		June 2017	June 2025	material requirements.
510	Planning		June 2017	October 2020	<ul style="list-style-type: none"> AFO/CAFO Planning ENG TN #23 requirements
511	Design	Subpart A - Procedures	June 2017	January 2018	<ul style="list-style-type: none"> Permit preparation and application assistance
		Subpart B - Documentation	June 2017	January 2018	<ul style="list-style-type: none"> Design folder requirements Inspection Plan requirements Non-TSP, Contracted engineering design (ie: WSCC PA)
		Subpart C - Instrumentation	June 2017	n/a	
512	Construction	Subpart A - General Information	June 2017	n/a	
		Subpart B - Preconstruction Activities	June 2017	n/a	

		Subpart C - Evaluation of Construction Materials	June 2017	January 2018	<ul style="list-style-type: none"> Used materials Prequalification of Materials
		Subpart D - Quality Assurance Activities	June 2017	January 2018	<ul style="list-style-type: none"> Quality Assurance Procedures Federally constructed projects.
		Subpart E - Equipment, Records and Coordination	June 2017	January 2018	<ul style="list-style-type: none"> Specialty Equipment Job Diaries
		Subpart F - As-Built Drawings	June 2017	January 2018	<ul style="list-style-type: none"> Job Class 1-4 as-built requirements.
		Subpart G - Safety	June 2017	January 2018	<ul style="list-style-type: none"> PPE
520	Soil and Water Resource Development	Subpart A - Erosion and Sediment Control	June 2017	January 2018	<ul style="list-style-type: none"> Storm Water Pollution Prevention Plan (SWPPP)
		Subpart B - Flood Plane Management	June 2017	n/a	
		Subpart C - Dams	June 2017	January 2018	<ul style="list-style-type: none"> WA Permitted structure policy Review and approval by SO required.



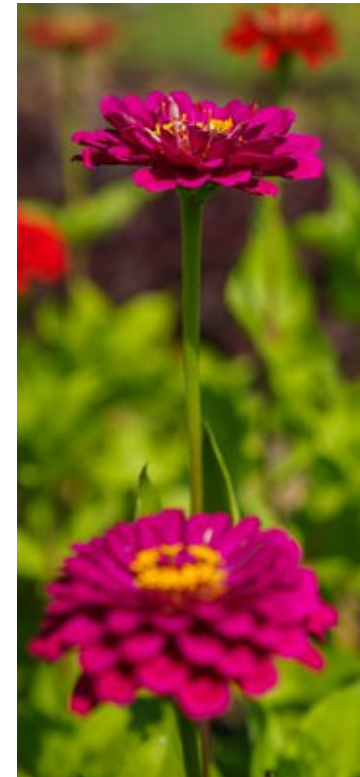
Future Updates

522	Water Supply and Conservation	Reservoir Operations Guide or Snowmelt	June 2017	January 2018	<ul style="list-style-type: none"> WA State Snow Survey policy
523	Irrigation		June 2017	January 2018	<ul style="list-style-type: none"> WA State Irrigation Guide.
524	Drainage		June 2017	January 2018	<ul style="list-style-type: none"> List of drainage assessment references
529	Reserved				
530	Hydrology	Subpart A - Hydrologic Investigations	June 2017	n/a	
		Subpart B - Hydrologic Procedures and Criteria	June 2017	January 2018	<ul style="list-style-type: none"> List of acceptable hydrologic procedures.
534	Geology				
540	Field Surveys		June 2017	TBD	<ul style="list-style-type: none"> WA Supplement Under Development
541	Drafting and Drawings		June 2017	n/a	
542	Specifications	Subpart A - Construction Specifications	June 2017	January 2018	<ul style="list-style-type: none"> WA Construction and Material Specifications
		Subpart B - Engineering Services Specifications	June 2017	n/a	
		Subpart C - Exhibits	June 2017	n/a	
543	Materials		June 2017	n/a	
544	Equipment		June 2017	January 2018	<ul style="list-style-type: none"> Calibration, Maintenance, Transporting, Use and Storage of surveying equipment.



Follow Up

- Draft supplements are available upon request for reviews
- Current Supplements can be found
 - <https://www.nrcs.usda.gov/state-offices/washington/washington-engineering>
 - At the bottom of the page
- Comments on any Supplements can be sent to lynelle.knehans@usda.gov





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Questions?



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