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| **Project Name:** |  | **Date:** |  |
| **Engineer Name:** |  | **AK P.E. License No.:** |  |
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| Use of this guide is required for construction of new and modifications to existing public water systems. Plans must be sealed, signed, and dated by an Alaska registered P.E. and submitted in hardcopy on 11‑inch by 17‑inch or 8.5‑inch by 11‑inch paper, if legible. If additional electronic copies are allowed by the reviewing engineer, they should be in Adobe PDF format; large submittals may be sent to our file transfer website at <https://drop.state.ak.us/drop/>. Incomplete submittals will not be forwarded to engineering staff for review.  **Note:** When completing this checklist, please answer the question and also include where in the submittal detailed information is found for each submittal requirement. Please be as specific as possible (specify document name, page number, section number, paragraph, etc.). This will accelerate the review process. | | | |

| **Submittal Requirements** | ***Regulatory Reference*** |
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| 1. **Cover Letter and Project Report:** Does the cover letter state what approval is requested from DEC? Is the engineer’s report sealed, signed, and dated by an Alaska registered P.E.? Does the engineer’s report include a narrative summarizing the project (where, what, why, when, and how) and a description of the basis for design? | *18 AAC 80.200(b)*  *18 AAC 80.205(a)(4)* |
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| 1. **Plan Review Fee and Contact Information:** A plan review fee is required and shall be included with all plan review requests. A plan review submittal will not be reviewed until payment is received. A blank invoice may be obtained at <http://dec.alaska.gov/media/10877/plan-review-invoice.pdf> or by contacting DEC. If payment is received and the fee calculation is incorrect, the check will be returned or shredded per the payer’s preference. If the applicant has requested the Department invoice for the fee, the submittal must include contact information for the person, agency, or company responsible for payment including the following:   **Name:**  **Mailing address:**  **Telephone number:**  **Email address:** | *18 AAC 80.1910* |
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| 1. **Project Drawings:** Are the construction drawings, specifications, and site plan included in the submittal? The construction drawings must be sealed, signed, and dated by an Alaska registered P.E. and in hardcopy format unless previous arrangements have been made. | *18 AAC 80.205(a)(2)*  *12 AAC 36.185* |
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| 1. **Engineer Submitting Record Drawings:** What is the name of and contact information for the Alaska registered P.E. that will be responsible for construction and will sign, date, and seal the *record drawings* for operational approval? Is the plan for construction inspections sufficient for the engineer to seal the record drawings? What is the contact information for the group or person that will be responsible for commissioning the system?   **Please note:** *DEC will not be able to accept disclaimers absolving the engineer sealing the record drawings of responsibility for the water system information in the record drawings. Record drawings must confirm that the project, as constructed, meets the requirements of 18 AAC 80, provides public health protection, and meets all written terms and conditions set by the Department for the construction and interim approval to operate (as applicable).* | *18 AAC 80.210(f)* |
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| 1. **Design Criteria and Calculations:** Does the submittal include design criteria, calculations, flow analysis, and other computations (e.g. treatment sizing, disinfection, etc.) as appropriate? | *18 AAC 80.205(a)(4)* |
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| 1. **Operational Narrative:** Does the operational narrative for the proposed project include both a description of all unit processes and the operational logic to be followed by the operator or the automated control and alarm systems? | *18 AAC 80.205(b)(9)* |
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| 1. **Monitoring Operation:** How will the operator monitor the system? What data will the operator collect? How will the data be viewed by the operator (i.e. software)? |  |
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| 1. **Operator Training and Certification:** Is documentation included demonstrating the DEC Operator Training and Certification Program has been provided a project schematic and list of proposed additives in order to determine the anticipated system class? Is the system owner or operator working with the Program to ensure compliance with 18 AAC 74 after construction of the proposed design? | *18 AAC 80.007*  *18 AAC 74* |
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| 1. **Service Pressure:** How do the engineer’s calculations demonstrate that as designed, the proposed distribution will be capable of maintaining at least 20 psi of service pressure at the highest elevation or pressure zone under peak demand flow conditions? | *18 AAC 80.205(a)(5)* |
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| 1. **Manufacturers’ Specifications:** Does the submittal include the manufacturer’s specifications for major components of the project and performance curves for the proposed pumps and pump motors? | *18 AAC 80.205(a)(2)* |
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| 1. **Asbestos Pipe:** Is any asbestos pipe specified for the project?   If the system is a new community or new non-transient non-community public water system, is the name and contact information provided for the person that will submit an application for a one time asbestos sampling waiver once the system is in operation? Contact the DEC office for a copy of the application form.  *If an existing system finds asbestos-cement pipe anywhere in the distribution or treatment system, DEC must be notified within 48 hours.* | *18 AAC 80.030(b)*  *18 AAC 80.315(b)(2)*  *18 AAC 80.010(a)(8)(C)*  *18 AAC 80.1035(b)* |
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| 1. **Lead Free:** Do the plans specify the design meets the new lead requirements including: (A) not containing more than 0.2 percent lead when used with respect to solder and flux; and (B) not having more than a weighted average of 0.25 percent lead when used with respect to the wetted surfaces of pipes, pipe fittings, plumbing fittings, and fixtures? | *Reduction of Lead in Drinking Water Act (amendment of the Safe Drinking Water Act, Section 1417)*  *18 AAC 80.205(b)(7)*  *18 AAC 80.500* |
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| 1. **Master Meter:** If the PWS is or may be classified as community or non-transient non-community, how does the project comply with the need for a master meter? | *18 AAC 80.235* |
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| 1. **Equipment Replacement:** Has the engineer provided the PWS an estimate of how often the proposed equipment will need to be maintained and replaced and the costs associated with that? | *18 AAC 80.205(a)(4)* |
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| 1. **Backflow and Cross-Connection:** Has the engineer submitted the backflow and cross-connection evaluations? Do they identify high risk service connections such as fire supply systems and medical facilities and describe how backflow prevention will be addressed (e.g. a utility cross-connection program, UPC standards, etc.)? Which project specification requires backflow prevention assemblies to be tested after installation? Will annual testing of the assemblies be in the O&M schedule? | *18 AAC 80.025* |
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| 1. **Materials in Contact NSF:** Is documentation attached verifying all components proposed for direct contact with water are certified by an ANSI accredited organization (e.g. NSF International, UL, CSA, WQA, etc.) to ANSI/NSF Standard 61 or an ANSI/NSF standard with equivalent materials health effects evaluation? If there are any components which are not certified in this manner, what is the engineer’s justification for their use? Has the engineer conducted an exhaustive search for certified alternative components that would be appropriate for the application? If none exists, how did the engineer show the proposed non-certified component(s) would be protective of public health? This may include a discussion of materials used in wetted surfaces/parts (i.e. Are they ANSI/NSF Standard 61 certified or made of stainless steel as listed in NSF 61 Annex C?), time in contact with the water, other certifications, etc. | *18 AAC 80.010(b)*  *18 AAC 80.030(b)* |
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| 1. **Operational Control Points:** Where are pressure gages, flow meters, rate of flow controllers, sample points, valves, etc. which assist the operator with operating and monitoring the system in compliance with the requirements of 18 AAC 80? Which drawings show where each is located? | *18 AAC 80.205(a)(2)* |
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| 1. **Instrument Air Gaps:** Has the engineering design assured air gaps for the instruments are within view of the instrument panel? | *18 AAC 80.025* |
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| 1. **Raw Water Sample Tap:** Which drawing sheet shows the required raw water sample tap? | *18 AAC 80.655*  *18 AAC 80.205(c)(6)* |
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| 1. **Corrosivity:** If the project proposes to make any change to the source or long-term water treatment, how did the engineer address the potential for each change to affect the corrosiveness of the distributed water and any mitigation that may be necessary? How does the treatment system design accommodate the future needs of adding corrosion control (i.e. space for equipment and chemical injection points)? | *18 AAC 80.205(c)(5)* |
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| 1. **Additives NSF 60:** Is documentation attached confirming chemical additives and products proposed for use in the public water system (e.g. disinfectants, coagulants, oxidizing agents, anti-scalants, membrane or UV cleaning chemicals, lubricants, drilling fluids, etc.) are certified by an ANSI accredited organization (e.g. NSF International, UL, CSA, WQA, etc.) to ANSI/NSF Standard 60 for use in potable water systems? If there are any which are not certified in this manner, what is the engineer’s justification for their use? | *18 AAC 80.010(b)(9)*  *18 AAC 80.30(a)* |
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| 1. **Polymers, Polymer Aids, and Ion Exchange Resins:** Has the engineer verified the sum of acrylamide and epichlorohydrin in products proposed for use and products proposed for continued use in the public water system does not exceed the regulated percentages at the dose and monomer level? Are lists of ingredients from the manufacturers included? Will the operator be trained and have the means to measure, record, and annually certify to the Department, in writing, that the amount of acrylamide and epichlorohydrin is maintained within the regulated percentages? | *18 AAC 80.045(a)*  *40 CFR 141.111* |
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| 1. **Chemical Mixing Water Source:** What is the water source for mixing chemicals? Which drawing includes the water supply lines/taps used for chemical mixing solutions and the backflow prevention for the water supply? | *18 AAC 80.205(b)(9)* |
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| 1. **Disinfectant Discharge:** Has the project been authorized by DEC to discharge the highly chlorinated water used for disinfecting the project or determined that the water, independent of volume, will meet State water quality standards in 18 AAC 70 and the required effluent limits? Information can be obtained by visiting DEC Division of Water webpage at <http://dec.alaska.gov/water/wastewater/stormwater/dewater-hydrostatic>. | *APDES*  *18 AAC 70* |
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| 1. **Wastewater Discharges from Drinking Water Treatment Facilities:** Is disposal of backwash and reject waters from the treatment facility addressed? Information on permitting the discharge of non-domestic wastewater can be found at <http://dec.alaska.gov/water/wastewater/engineering/engineered-systems>. | *18 AAC 72*  *18 AAC 60*  *APDES* |
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| 1. **Project Schedules:** Does the cover letter or engineer’s report include a description of the proposed construction and operation schedules including the sequence of construction and commission/transition to operation? | *18 AAC 80.205(b)(9)* |
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| 1. **Disinfection before Operation:** Which specifications address disinfection of parts of the system that are not discussed in other checklists submitted? If an AWWA standard is not specified, does the proposed method include adequate detail for the contractor to implement? If an AWWA standard is specified, will the contractor have a copy of the standard? How will cross-connection control be accomplished to prevent backflow into the PWS during flushing and disinfecting activities? | *18 AAC 80.205(b)(9) 18 AAC 80.010(d)(2)* |
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| 1. **Emergency Preparedness:** If the submittal involves a new community PWS, is the name and contact information provided for the person that will submit the documentation to satisfy the regulatory emergency preparedness requirements once the system is in operation? Documentation may be required for final approval to operate the system. | *18 AAC 80.055* |
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| 1. **New Public Water System:** Has documentation been included showing the existence or formation of a local government organization, a homeowner's association, a private utility, a commercial entity, or other entity, to operate and maintain the system? | *18 AAC 80.205(b)(10)* |
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