



Statewide Fish Passage Program Quality Plan

**Project Delivery QA/QC Program
Oregon Department of Transportation**

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Statewide Fish Passage Program Quality Plan

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Revision History (the current revision is first entry)

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9/17/2024	A. Gillette	<ul style="list-style-type: none">• All	<ul style="list-style-type: none">• Updated to July 2024 Template.
1/11/2022	A. Gillette	<ul style="list-style-type: none">• All	<ul style="list-style-type: none">• First Published Draft.

1. Fish Passage Program Quality Management

Quality in project delivery is the degree to which a product, service, or deliverable conforms with established project and design requirements, satisfies its intended purpose, and meets the customer's requirements and expectations.

Quality is the result of a cooperative partnership between the providers of project development services (engineering services and technical reports) and quality assurance (QA). Those providing project development services must implement quality control (QC) to ensure products and services meet customer requirements and expectations. Those responsible for QA review the process to confirm the quality management efforts are achieving desired results.

The quality management system efforts foster continuous improvement in the ongoing quest to meet customer expectations, provide high quality engineering and technical services, and make efficient use of resources.

The Oregon Department of Transportation recognizes its success will be determined, in part, by the quality of services and products it provides for its customers. Assuring quality requires not only a commitment but also a consistent systematic approach. The ODOT environmental QC program endeavors to go beyond the review of work products to result in a continuous improvement of the processes and products associated with environmental services. The ultimate goal of QC is to achieve an overall quality of work in all endeavors that meets or exceeds the goals of the agency. Within that context, the intent of implementing this quality control program includes the following to:

- Emphasize the importance of quality in achieving the goals of the agency. In particular, to emphasis communication, collaboration, and care in completing environmental work. This is consistent with the values enunciated in ODOT's Strategic Business Plan, "EXCELLENCE: We use our skills and expertise to continuously strive to be more efficient, effective and innovative."
- Assist in leveraging the highest levels of experience and technical expertise available, with respect to all projects, not just those that are large or complicated.
- Assure and document compliance of fish passage approach with legal requirements and organizational policy.
- Allow for an analysis of the strengths and weaknesses of completed projects in order to develop a process of continual improvement.
- Provide support to individual project designers. Collaborating with other experienced individuals helps the professional of record (POR) be more confident in their work and results.
- Provide mentoring for workers trying to develop experience and expand their abilities. Often, the best training comes from working on a project with a reviewer who has more

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experience. Similarly, experienced staff often learns from recent graduates and young staff have been exposed to recent advances in the profession through their educational experience and offer a fresh perspective uncolored by institutional inertia.

- Identify and address mistakes, oversights, and logic errors and to compensate for inexperience. All people can and do make mistakes despite their knowledge, experience, or level of effort. A collaborative approach to work and the involvement of independent reviewers will nearly always result in the elimination of mistakes or errors of logic that would not be identified by a single dedicated individual.

The QC process is not intended to relieve POR from responsibility for their work products. Ultimately, the POR is responsible for self-checking their work and maintaining compliance with applicable manuals, standards of practice, errors, omissions, and state and federal fish passage criteria.

2. Quality and Technical Standards

When work products or deliverables are developed by consultants for ODOT projects, those documents will be completed under the requirements of a consultant-specific QC plan, reviewed and approved by ODOT.

The responsibility for QC and QA rests with the consultant. ODOT responsibilities with respect to consultant work consists of limited QA and verification of the consultant's QC and QA processes.

ODOT quality reviews are not intended to replace or supplant the QC or QA responsibilities of the consultant. Work products that contain demonstrable errors at the time of submission to ODOT will not only need correction but are indicative of a failure in the consultant's QC and QA processes and may require deeper, programmatic review and action.

For fish passage deliverables, QC ensures projects meet or exceed state and federal fish passage criteria as defined in Oregon Administrative Rules 635-412- 0005 through 0035, and as directed by the National Marine Fisheries Service. The following are helpful resources for development of fish passage application packages:

- Oregon Administrative Rules 635-412-0005 through 635 – 412 – 0035.
- ODFW Clarification of Bridge Triggers for Fish Passage Statues (2008).
- National Marine Fisheries Service Guidelines for Salmonid Passage at Stream Crossings (2022).
- ODOT Hydraulics Manual, Aquatic Passage Chapter (2024).
- USFS Stream Simulation Design Manual (2008).
- ODOT Biology Manual.
- ODOT Design Checklist for Fish Passage Applications (2021).
- Standard scope of work (SOW) for consultant deliverables.
- QC checklists for Fish Passage Application Packages (Approval, Waiver and Exemption).

The [ODOT Project Delivery QA/QC Program website](#) provides an overview of the ODOT Project Delivery QA/QC Program and access to the quality standards of practice. The Project Delivery Quality Program Manual can be found there, as well as a listing of the quality plans and guidance documents, including the region technical center quality plans, the technical discipline quality plans, and the transportation project management statewide quality plan. There is also a listing of the associated quality forms and checklists.

3. Roles and Responsibilities

The roles and responsibilities for implementing fish passage quality management are described in this section.

Individuals, both ODOT and consultant, who prepare fish passage program documents, are required to have a college degree with a major in biology, fish and wildlife science, natural resources or related field.

- Experience with native migratory fish and presence determinations, fish passage barrier assessment and remediation analysis, and post project monitoring techniques is required.
- Experience in federal and state fish passage permitting processes, including evaluating fish passage conditions, fish presence, habitat quality, and use by fish species and life stage is required.

A variety of engineers and biologists as well as technicians and office staff will be involved in the development of fish passage documents. However, the responsibility for these documents rests, by law, with professionals certified in the field of engineering. The POR (engineers) are responsible for acting within their own level of competence and knowledge. A professional agreeing to work outside of their competence and training is potentially endangering the public and is violating state law.

Final plan sheets depicting fish passage design, temporary water management, and waters impact areas, shall be stamped and approved by a registered professional engineer as defined in ORS 672.002(2). The professional engineer must hold a current registration in active status with the Oregon State Board of Examiners for Engineering and Land Surveying, and must supervise and direct the work proposed. Engineers shall place their official Oregon registered professional engineer certified seal and signature on all final reports, maps, design drawings, and specifications.

For each project, the QC team shall consist of individuals representing the ODOT environmental unit and applicable regulatory agencies. This includes a qualified biologist as well as state and federal liaisons. Additional persons of responsibility include region management, and headquarters staff. The nature and responsibility of each is described below.

Table 1: Fish Passage Program Quality Roles and Responsibilities

Roles	Responsibilities
Qualified Biologist	Person in responsible charge for fish passage approach and interpretations and decisions made on the project. Provide design guidance to ensure projects meet established criteria and preform QC review on permit application packages prior to submittal.

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Roles	Responsibilities
	Must have a college degree with a major in biology, fish and wildlife science, natural resources or related field. Experience with native migratory fish and presence determinations, fish passage barrier assessment and remediation analysis, and post project monitoring techniques is required. Experience in federal and state fish passage permitting processes, including evaluating fish passage conditions, fish presence, habitat quality, and use by fish species and life stage is required.
ODOT Fish Passage Liaisons	State (Oregon Department of Fish and Wildlife) and Federal (National Marine Fisheries Service) personnel who work closely with ODOT environmental staff, and consultants, to ensure projects meet respective criteria. Provide design guidance to ensure projects meet established criteria. Perform QC review on permit application packages prior to submittal. Represent regulatory engineers. Provide application approvals, requested changes, or denials on behalf of regulatory agencies.
Hydraulic Engineering Reviewer	Provides primary technical review for hydraulic aspects of the project. Licensed as certified engineers with the state of Oregon.
Region Management	Ultimately responsible for the management of staff and resources within a region.
Headquarters Staff	Senior biologists and engineers are located in the Technical Services & Engineering Branch in Salem. Responsible for standards and policies, including the development of this manual, for environmental work throughout ODOT as well as for agency wide QA reviews.

3.1. ODOT Work Products

Documents generated by ODOT specialists or ODOT-qualified consultants use standard templates and checklists. The quality of a document begins with the expertise of the individual writing the document and the accuracy of the information contained within it. The three key Fish Passage Program documents that require peer review and a peer signature on the review checklist, are the fish passage:

- Approval Application packages.
- Waiver Application packages.
- Exemption Application packages.

Informal peer review is recommended for all other documents.

ODOT environmental staff and or consultants prepare the following documents that may be subject to QC peer to peer review:

- Culvert Repair Programmatic Agreement Initiation and Tracking Forms
- Culvert Repair Programmatic Agreement Annual Reports
- Culvert Repair Programmatic Agreement Final Reports

3.2. Outsourced Work Products

For fish passage, the most common consultant produced documents produced include:

- Fish Passage Scoping Memos
- Fish Presence Determinations
- Basis of Design Reports
- Fish Passage Approval Application Packages
- Fish Passage Waiver Application Packages
- Fish Passage Exemptions Application Packages
- As-built and post-construction Monitoring Reports

These documents are discussed in more detail in sections 4.1 – 4.1.6.

4. Quality Control

The process described by this section defines the minimum level of communication and collaboration necessary to meet the requirements of the ODOT quality plan.

Members of the project team are encouraged to freely communicate throughout the life of the project in order to assure a high level of service and quality and reduce significant amounts of rework, errors, or omissions. All of the deliverables listed in sections 3.1 and 3.2 above should have at a minimum, informal peer to peer review. Fish passage application, waiver, and exemption packages that are submitted to agencies for approval are required to have formal QC review.

The Fish Passage Program follows this general QC process:

- Preparation of a fish passage application. This can be for a full fish passage approval, a fish passage waiver, or a fish passage exemption, using application forms available from ODFW.
- Submittal of draft fish passage application to qualified biologist for review.
- Review of fish passage application using applicable QC checklist:
 - 734-5278 – QC Checklist for Fish Passage Application Plan for Road-Stream Crossing.
 - 734-5276 – QC Checklist for Fish Passage Waiver Application for a Road Stream Crossing.
 - 734-5277 – QC Checklist for Fish Passage Exemption Application for a Road Stream Crossing.
- Edits and finalization of the application package using recommendations from QC review process as documented on QC checklist.
- Submittal of application for regulatory agency review.

4.1. Quality Control Milestones

For clarity, the ODOT project delivery process is broken down into a series of milestones or phases. The following table details the review required at each listed phase.

Table 2: QC Milestones

Milestone	Document	Guidance	Requirements <i>include whether signed or initialed, and if so, by role</i>
Scoping	Fish Passage Scoping Memo	--	Internal Peer Review
Project Initiation	Reserved	Reserved	Reserved
Design Acceptance Package (DAP)	Basis of Design Reports	Reserved	Internal Peer Review
Preliminary Plans	Basis of Design Reports	Reserved	Internal Peer Review
Advance Plans	Basis of Design Reports Draft Fish Passage Approval Application Packages Draft Fish Passage Waiver Application Packages Draft Fish Passage Exemptions Application Packages	Forms 734-5276, 734-5277, 734-5278	Formal QC review including signed QC checklists
Final Plans	Fish Passage Approval Application Packages Fish Passage Waiver Application Packages Fish Passage Exemptions Application Packages	Forms 734-5276, 734-5277, 734-5278	Formal QC review including signed QC checklists
Construction Phase	As-built drawings	Reserved	Internal Peer Review
Post Project Monitoring Phase	Post-construction Monitoring Reports	Reserved	Internal Peer Review

4.1.1. Fish Passage Scoping Memo

The fish passage scoping memo is produced early in project scoping. The project biologist produces the report and informs the project on approach to addressing fish passage, if required. The document includes:

- Native Migratory Fish Determination produced by Oregon Department of Fish and Wildlife (ODFW) staff.
- Brief project description that informs a fish passage trigger determination.
- Site specific and watershed information including potential fish habitat and barrier assessments.

- Recommended approach to addressing fish passage rules.

The fish passage scoping memo should result in guidance to addressing state and federal fish passage rules, when applicable. The species and habitat information in the memo should be submitted to state and federal agencies through ODOT fish passage liaisons for concurrence. The approach to meeting fish passage criteria should also be reviewed by fish passage liaison for concurrence. The fish passage scoping memo does not go through a formal QC process and should have a review completed by agency biologist before finalizing.

4.1.2. Basis of Design Report

Basis of design reports are developed by the project engineer. These reports summarize hydraulic and geotechnical conditions of the project, and inform regulatory reviewers of fish passage conditions expected post project. The reports are reviewed by project biologists and engineers before submittal to agencies through fish passage liaisons. These reports are submitted to regulatory agencies at design phase gates for review and concurrence. Basis of design reports do not go through a formal QC process and should have a review completed by the project team before finalizing.

4.1.3. Draft Fish Passage Application Packages

There are three main fish passage application packages. Each is required to have formal agency QC prior to submittal to regulatory agencies. The fish passage scoping memo will be used to determine which application is appropriate for each site. In the event of a regulatory trigger for fish passage rules, the project must address fish passage using one of the following:

- Fish Passage Approval Application Packages.
- Fish Passage Waiver Application Packages.
- Fish Passage Exemptions Application Packages.

Each of these application packages include:

- A completed Microsoft Word application document available from ODFW.
- Associated design drawings.
- Applicable hydraulic calculations.
- Basis of design report or additional supporting documents as appropriate.

The application is filled out by the project biologist and engineer. The plan sheets and hydraulic models should be produced by the project engineer. The basis of design reports and any additional narrative should be produced by the project biologist or engineer. Guidance for development of the application is available from the Fish Passage Program and the Hydraulic Engineering Program.

Agency biologists and engineers shall review draft application packages prior to submittal to regulatory agencies. Once internal review has been completed, the draft application packages shall be submitted to state and federal agencies through fish passage liaisons. Following review and preliminary approval by regulatory agencies, final application packages can be developed.

4.1.4. Final Fish Passage Application Packages

Final application packages shall be developed by project biologists and engineering staff and incorporate reviewer feedback from the draft submittal process. These application packages require formal QC review. The final fish passage application packages shall consist of:

- A completed Microsoft Word application document available from ODFW.
- Associated design drawings.
- Applicable hydraulic calculations.
- Basis of design report or additional supporting documents as appropriate.

The steps below summarize the submittal and QC review process:

- Once developed, final fish passage application packages shall be submitted to a qualified biologist for QC review.
- The qualified biologist will complete a review using the appropriate QC checklist.
- Recommended edits or additional information requests are made on the QC checklist, and the reviewer signs the checklist.
- The application package and signed QC checklist are returned to the developer for edits. The Fish Passage Program coordinator should be included.
- Once the requested edits are made, the application package is resubmitted to ODOT biologists.
- When deemed complete, the biologist sends the application package to regulatory agencies for formal project approval. The biologist sends the application package to fish passage liaisons and includes the Fish Passage Program coordinator.
- The Fish Passage Program coordinator and fish passage liaisons will deliver regulatory approval back to the project team.

4.1.5. As-Built Drawings

The project engineer shall complete as built drawings during and after project construction. As built drawings do not require formal QC review. When complete, as built drawings and any associated narrative of the project shall be submitted to the Fish Passage Program and fish passage liaisons.

4.1.6. Post Construction Monitoring Reports

Post construction monitoring reports are required on every project that receives an approval from ODFW. These reports show regulatory agencies various fish passage conditions following the completion of the project and include narrative and photos.

Either the project biologist or engineer may complete the post project monitoring reports. Post project monitoring reports do not require formal QC review. The project biologist should review the post project monitoring reports before submittal. A template for fish passage monitoring reports can be found on the Fish Passage Program webpage.

Completed post project monitoring reports shall be submitted to the Fish Passage Program and fish passage liaisons.

4.2. Quality Control Reviews

QC reviews are undertaken to assist the POR in developing documents that are free of errors and mistaken assumptions. The reviews are also intended to assure consistency of the documents with applicable state and federal fish passage criteria. Lastly, quality reviews should verify that previous QC review comments have been understood and addressed.

For expediency and consistency, the review of fish passage application packages is assisted by a variety of standard templates and checklists. The development and implementation of these templates and checklists is intended to assist designers and reviewers in completing their mission and to provide reminders of applicable guidance and standards. It is important to note that the use of these tools is not intended to replace sound professional judgement nor to relieve the POR from their personal responsibilities. Both preparers and quality reviewers need to be technically competent in the discipline.

Fish passage quality reviews begin with the preparer, who checks the quality of their work. The preparer completes the appropriate fish passage plan application, provided by ODFW. The preparer then provides the application to a QC reviewer who checks for accuracy, i.e., quantity, quality, completeness, and for compliance with state and federal fish passage criteria. The following forms are used during QC review:

- 734-5278 – QC Checklist for Fish Passage Application Plan for Road-Stream Crossing.
- 734-5276 – QC Checklist for Fish Passage Waiver Application for a Road Stream Crossing.
- 734-5277 – QC Checklist for Fish Passage Exemption Application for a Road Stream Crossing.

These templates and checklists are intended to assist designers and reviewers in completing their mission and to provide reminders of applicable guidance and standards. It is important to note that the use of these tools is not intended to replace sound professional judgement nor to relieve the POR from their responsibilities.

The reviewer then checks back with the preparer whether they accept the comments. See Section 4.3 on how differences of opinion are handled. Once agreement is reached, corrections are made, and a back-check is done to verify that corrections were made as intended before sending to the POR for signing.

QC reviews assist the POR in developing documents free of errors and mistaken assumptions. The reviews verify documents are consistent with applicable standards and guidance and there is consistency between calculation results and recommendations.

Quality reviews should verify previous QC review comments have been understood and addressed. There should also be a check with other disciplines to make sure there is interdisciplinary consistency for the project design.

4.3. Authority of the Reviewer

Most often, the reviewer and POR will address recommendations and changes in a collaborative manner and create a work product that satisfies both parties. However, situations will arise where that is not tenable. For those cases, guidance is needed to address the authority of reviewers to require changes in the work products or tasks. The relationship between a reviewer and the licensed professional in responsible charge is also a part of that discussion.

- ODOT has the right, responsibility, and authority to establish the procedures, policies, codes, standards of practice and level of quality under which work products and tasks will be conducted. The only limitation is that practice standards should be no less than the standard of care in the industry.
- All workers, especially licensed professionals, have a duty to complete assigned work in a manner that meets the policies and procedures of their employer. Licensed professionals also have a duty to always protect the safety of the public and to practice within their level of competence and according to the standard of care in the industry. There is no conflict between these duties unless an employer tries to require a licensed professional to do something that exceeds their professional competence and/or endangers the public.
- Recommended changes to the work will generally fall into four categories:
 - Those that represent different ways to analyze or view the work that are suggested or advisory.
 - Those that are required to meet or exceed state and federal fish passage criteria.
 - Those that represent serious differences of opinion but do not violate the standard of care or impact the safety of the public.
 - Those that violate the standard of care or impact the safety of the public.
- Compromise and open-minded communication is crucial. Further, it is the POR's first duty to try and solve the matter with the reviewer. The reviewer should make every

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possible effort to explain their position to the POR and listen to feedback. Failing resolution between the parties, the resolution will vary depending on the nature of the dispute.

- For changes requested by the reviewer that would fall into the first category and would be considered suggestions of feedback, the POR should respond to the reviewer but does not need to document their choice to not incorporate the suggested changes.
- For the second category, recommended changes may be required to satisfy state and federal regulation pertaining to fish passage law. If the changes requested cannot be made, then the project risks denial for permit applications.
- For the third category, serious differences, not violating the standard of care or impacting the safety of the public, the POR should respond to each item individually and document why they are not implementing the recommendation. It may be necessary for the reviewer to permanently document their dissent from the decision made.
- For differences that either party (POR or reviewer) considers to violate the standard of care or impact safety of the public and that cannot be resolved, the POR shall next work with the unit manager and then the technical center manager prior to seeking other ways of resolving the problem.
- Reviewers cannot require licensed professionals to change work in a way that would endanger the public or violate the standard of care.
- Licensed professionals will still be expected to seal work products and accept technical responsibility for projects to which mandatory changes have been made by reviewers. Only if the changes jeopardize the safety of the public or violate the standard of care would the licensed professional have an argument for not being responsible for sealing the work.

Differences in engineering opinion exist and it is likely that reviewers and PORs will find areas of disagreement. On first identifying areas of disagreement, it is incumbent upon the parties to discuss the issue and attempt to come to a solution that is satisfactory to both parties. When an impasse has been reached, the issue will be reviewed by headquarters environmental staff that will be made available to both parties. This review process will include representatives from state and federal regulatory agencies. Ultimately, it may be necessary for one of the parties to recuse themselves from the project.

In the event of a minor or moderate technical disagreement between reviewer and designer, the parties may elect to write a short justification and include with the electronic documentation.

If there is a major technical disagreement, the issue should be elevated within the discipline or region technical center, as applicable. If the issue cannot be resolved at that level, it is elevated to the discipline section level, i.e., state bridge engineer, and if needed, up to the chief engineer.

4.4. Software, Tool, and Data Validation

Reserved

4.5. Quality Control Documentation

As project QC work progresses, quality records are created that provide reviewable evidence documenting that quality work was done. These quality records also provide the basis for quality reviews and/or audits (performed by professional auditors).

Documentation is necessary for assurance the QC process was completed per the requirements, and allow for the subsequent completion of QA. Feedback with respect to the ability of this plan to meet the needs of the agency can only be received if the process is documented. For fish passage documents requiring formal QC, signed copies of checklists are necessary for the project files.

Documentation needs to occur as the QC work is completed and must not be postponed to the end of the project. By documenting QC at each phase of the project and saving it appropriately, subsequent reviewers can confirm the QC process was implemented throughout the life of the project.

If standard QC checklists, forms, or templates are unavailable for a particular task, you are still required to have documentation of design elements checked, as described in manuals, guidance, or considered necessary to meet industry standard of care.

All reviewed work products or tasks will be documented in the project file, recording the names of the reviewer and the date the review was accomplished.

Review comments and notes should be written/recorded to the greatest extent possible to promote good communication and minimize misunderstandings. In addition, reviewers should have a conversation with the person who created the work product or task to go over their comments. This establishes a personal relationship that helps to lessen possible conflicts. Retain reviewers' comments in ProjectWise.

To the extent reasonable to document the process of deciding on the final approach, unsealed drafts of professional deliverables should be retained within the project file. Electronic version control should be in accordance with file naming convention detailed elsewhere in this manual. Drafts should be retained for significant projects with multiple iterations.

Quality records in ProjectWise are stored in their regular discipline or milestone directory, with either "QC," "QA" or "QV" in the document title or description, to facilitate searches for quality documentation. Quality files from each discipline or milestone folder in ProjectWise will be added to a set created in the "7_quality" folder for Fish Passage:

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See [ProjectWise 7 Quality folder FAQ's](#) and guidance on [How to Create Document Sets QG.pdf](#).

Deliverables and all quality records needed to confirm that a thorough QC review has been completed at the time of production will be stored in ProjectWise following ODOT ProjectWise protocols and naming conventions. Electronic signature or initials will be considered a valid secure signature. The electronic signatures will include at least the name and date the document was signed.

4.6. QC Communications

The process described by this section defines the minimum level of communication and collaboration necessary to meet the requirements of the fish passage quality plan.

Members of the project team are encouraged to freely communicate throughout the life of the project to assure a high level of service and quality and reduce significant amounts of rework, errors, or omissions.

5. Quality Assurance

Quality assurance (QA) is a system undertaken to maximize the effectiveness of the quality program. The QA process will assist in measuring the effectiveness of the quality efforts in order to provide input into continuous improvement of the work and assist in identifying technical development needs.

The goals of an effective QA process are:

Verification – A primary purpose of the QA program is to confirm all elements of the QC process took place at the right time and applicable standards were applied effectively. This is done by collecting and processing information relative to the connection between quality processes and outcomes.

Competency Building – The QA process will assist in developing an agency-wide vision of the current needs with respect to technical knowledge and competence. The evaluation of where projects succeed or fail, and the role of the QC program in assuring success will provide data to be used in identifying gaps or weaknesses within the current knowledge base.

Continuous Improvement – Beyond the above-described project specific compliance, the QA process is intended to enable continuous improvement within both the quality program as well as within the practice community providing discipline services for ODOT projects.

To achieve the goals stated above, the QA process must be objective, transparent, and effectively communicated.

5.1. Quality Assurance Review Process

Completeness Review – Initial information on completed projects will be gathered from ProjectWise. The QA team will complete an initial review and evaluation, focused on the completeness and timeliness of the QC documentation and will write up their findings and recommendations in a draft version of a short, project-specific report or email. The draft report or email documentation will be provided to region biologists, environmental coordinators, hydraulic engineers, and their direct supervisor.

Project Review – An in-depth review of the project documentation will address how well the project met standards and the extent to which the QC process contributed to the success of the project. The results of the in-depth reviews will be collected and evaluated for inclusion in an annual summary report.

5.2. Quality Assurance Documentation

Annual reports generated from completeness and project reviews will be distributed to region environmental and engineering staff. These reports shall also be kept on file within the Fish Passage Program, and available for distribution upon request.

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Quality records in ProjectWise are stored in their regular discipline or milestone directory, with either “QC,” “QA” or “QV” in the document title or description, to facilitate searches for quality documentation. Quality files from each discipline or milestone folder in ProjectWise will be added to a set created in the “7_quality” folder (see [ProjectWise 7 Quality folder FAQ's](#) and guidance on [How to Create Document Sets QG.pdf](#)) for Fish Passage Program:

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5.3. QA Communications

Reserved.

Appendix A – Glossary

Table A-3: Glossary of Terms, Titles, and Acronyms

Term	Explanation
DAP	Design acceptance package; statewide phase gate project delivery milestone.
NOAA	National Oceanic and Atmospheric Administration.
NMFS	National Marine Fisheries Service.
PS&E	Plans, specifications, and estimates; statewide phase gate project delivery milestone.
Quality control (QC)	Focused on the product fulfilling quality requirements as it is developed.
Quality assurance (QA)	Focused on the process and assurances that quality requirements are being fulfilled. <ul style="list-style-type: none">• Verifying that QC was done following the quality processes.• Reviews of QC and QA processes, supporting continuous improvement.• Project and program level QA reviews.
Quality Management	Policies, processes, activities, and responsibilities that ensure the overall quality of tasks and deliverables in project delivery. Implemented by means such as quality planning, QC, QA, and continuous improvement within the system.
Quality Verification (QV)	Review process to ensure technical sufficiency of all deliverables, verify performance of all quality tasks, and to document the completion of those tasks.
POR	Professional of record
ODOT Environmental Staff	ODOT personal representing the Environmental Unit. For Fish Passage, these positions include agency biologists and region environmental coordinators, located in region and headquarter offices.
ODOT Fish Passage Liaisons	State (Oregon Department of Fish and Wildlife) and Federal (National Marine Fisheries Service) personnel who work closely with ODOT Environmental staff, and consultants, to ensure projects meet respective criteria.
ODFW	Oregon Department of Fish and Wildlife.
Technical sufficiency	Process of reviewing a deliverable for compliance with all applicable laws, rules, regulations, technical standards, guidance, policies, and procedures, suitable for the milestone. An initial check of key elements can be used to decide whether additional review is warranted.

ODOT provides a safe and reliable multimodal transportation system that connects people and helps Oregon's communities and economy thrive.

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