



# Wastewater Regulation Stakeholder Engagement Sessions

March 23, 2017

# Table of Contents

I.	Executive Summary.....	2
II.	Working Group Formation.....	2
III.	Expanded Permit by Rule Proposal.....	4
IV.	Organization of 18 AAC 72 .....	5
V.	Specific 18 AAC 72 Suggested Revisions.....	6
VI.	General Concepts for Regulatory Consideration ..	8
VII.	OWSIM Suggested Revisions .....	9
VIII.	Next Steps and Timeline.....	11

# Executive Summary

---

The Wastewater Engineering Support and Plan Review (ESPR) Section established a Stakeholder Working Group to discuss potential revisions to Title 18 of the Alaska Administrative Code, Chapter 72 (18 AAC 72) including the *Onsite Wastewater System Installation Manual* (OWSIM) for the upcoming Phase II revisions. The group was composed of 5-6 core members of engineers, real estate professionals, and certified installers. Other stakeholders joined the teleconference meetings throughout the series as available.

ESPR began by outlining some potential streamlining of the approval process for smaller onsite wastewater systems to include the concept of issuing operational approvals with expiration dates. Currently, the Division issues approvals which are valid indefinitely, with no programmatic contact with systems once they are approved after construction for the life of the system. Stakeholders responded favorably to the streamlined construction approval process with its one-step process to gain construction and operational approval. Many stakeholders, however, expressed concern that property owners would not take time to renew their operational approvals in the future, no matter how simple the process, and requiring renewals in exchange for basic information on the system's functionality would only create a large number of violations.

Stakeholders provided specific comments and recommendations for organization of 18 AAC 72 and the OWSIM, which are detailed later in this document. There was overall support for removing regulatory requirements from the OWSIM and placing all regulatory requirements in 18 AAC 72. The group supported the concept of turning the OWSIM into a technical specification guide which would be updated annually at similar meetings with industry professionals to keep the specifications current with available materials in Alaska. There was also support for reorganizing 18 AAC 72 to make an independent Article for conventional onsite systems, and better organize 18 AAC 72 in general.

Stakeholders recommended additional regulation of industry segments the Department currently does not regulate, or only partially regulates. There were recommendations to regulate the septic pumping and maintenance industry, which would enable these regulated professionals to conduct the periodic reviews to renew approvals discussed above. Additionally, there were similar recommendations to regulate well drillers and to expand the training and professional certification of the Certified Installers program under 18 AAC 72. Stakeholders provided comments that numerous installation problems were caused by personnel unfamiliar with standard practices and regulatory requirements, highlighting the need for additional professional training.

The Stakeholder Working Group is an important tool for ESPR to obtain feedback from the field and various industry segments. The composition of the group changed over time, and as word spread, more stakeholders attended and expressed interest. The Department's Wastewater Systems Listserv proved to be an efficient method to mass distribute information to the group, but a web portal or online collaborative tool may also enhance effectiveness. ESPR plans to continue hosting Wastewater Working Group meetings throughout the regulation revision process to address ongoing concerns and remain engaged with stakeholders.

## Working Group Formation

---

ESPR completed Phase I revisions to 18 AAC 72 and the OWSIM, which became effective January 27, 2016. Phase I focused largely on revisions to the OWSIM which replaced the badly outdated "Installer's Manual" from 2000. Phase I revisions were largely an internal ESPR effort using online meetings and a charrette in 2014 to complete much of the work for the OWSIM. During the public comment process, some stakeholders provided comments for the OWSIM, but many comments required additional public comment to implement, which was, in part, the genesis for conducting Phase II revisions and a more collaborative approach with stakeholders.

ESPR began soliciting participants for the Stakeholder Working Group in September 2016. The initial concept was to create a core membership of 5-6 stakeholders from across the industry, including engineers, certified installers, real estate professionals, real estate financial professionals, onsite system pumpers, and wastewater system vendors from across Alaska. An initial core membership was formed, but as the meetings progressed, the concept of core members and members-at-large became unnecessary and the distinction was dropped after the first two meetings. All stakeholders were welcomed to attend any and all meetings as their schedule allowed.

ESPR developed an e-mail listserv titled “DEC Wastewater Systems” on the State of Alaska’s listserv page available at: <http://list.state.ak.us/mailman/listinfo/dec.wastewater.systems>. Any stakeholder who expressed interest in being involved in the discussion of suggested regulation or technical revisions was added to the listserv. Each office nominated stakeholders who also expressed interest in participating. The listserv began to grow, and as meetings progressed, word of mouth also helped develop additional interest. The listserv now has 91 subscribers.

In addition to the staff of the ESPR section, the following stakeholders participated in the Wastewater Working Group.

Name	Industry Segment
Dan Tucker	Certified Installer
Jeff Garness	Engineer
Bethany Gassan	Real Estate Financing
Joel Johnson	Real Estate
Lee Johnson	DEC Drinking Water
Mark Buggins	Municipal Utilities
Bob Tsigonis	Engineer & Wastewater System Vendor
Irene Gallion	Engineer
Clayton Spittler	Engineer
Richard Smith	Engineer
Bill Joiner	Engineer
Andrew Grey	Engineer
Mitch Loveless	Certified Installer
Brett Serling	Engineer
Robert Badgett	Engineer
John Barry	Engineer
Gordon Carlson	Certified Installer
Roy Strandberg	Municipal Utilities
Marc Harmon	Municipal Utilities
Stu Laidlaw	Wastewater System Vendor
Shawna Laderach	DEC Drinking Water
Alex Hansen	Engineer
Mike Tauriainen	Engineer
Jeremy Kaufman	Engineer
Max Carpenter	Surveyor

The Wastewater Working Group conducted five working meetings, and a sixth meeting to review this report and determine future meeting frequency. The group met initially on November 17, 2016, then again on November 30, December 15, January 12, January 26, and finally on February 16, 2017. Each meeting was held via teleconference, which allowed members to attend with ease. Some stakeholders elected to attend the teleconferences at DEC offices in Anchorage, Soldotna, Wasilla, Fairbanks and Juneau, but the majority of participants elected for teleconference attendance. The initial meeting explored the use of Skype as a webinar format, but many users were not equipped to make this an effective option to enhance the experience of the group, so the Skype format was dropped in favor of teleconference only.

## Expanded Permit by Rule Proposal

---

ESPR briefed the group on a proposal to expand the universe of systems eligible for permit by rule installation and automation of the application process. Currently, 18 AAC 72 allows authorized homeowners, Certified Installers, and Professional Engineers licensed by the State of Alaska to install conventional onsite wastewater systems without prior approval of the Department as long as the system conforms to prescribed design requirements and technical specifications in 18 AAC 72 and the OWSIM. The permit by rule process enables rapid installation of a wastewater system by bypassing the engineering review and construction approval process.

ESPR proposed a modification to the current permit by rule structure which would remain essentially unchanged for approved homeowners and Certified Installers, but would be substantially broader for Professional Engineers. The proposal would allow Professional Engineers to design and construct onsite wastewater systems for domestic wastewater that are less than 1,500 gallons per day without engineering plan review and construction approval. The permit by rule inclusion would be based on the professional assertion of the Professional Engineer that the installed system meets regulatory requirements and is protective of public health, the environment, and public and private water systems (18 AAC 72.005). ESPR envisions all systems installed via the permit by rule process will be registered with the Department via an online application process similar to the Construction General Permit application.

Currently, 18 AAC 72 is structured such that system applications or engineering plan approvals to operate are valid indefinitely with no requirement for owners to renew or inform the Department of system functionality or status. ESPR proposed that in addition to the streamlined permit by rule process, it would begin to issue operational approvals with expiration dates. Property owners would be required to renew their operational approval using an online or mail-in renewal form that required basic information on the system's operation, maintenance performed, current property owner, known problems, etc. Sampling of the effluent or drinking water wells would not be a mandatory component for renewal. These renewal notices would begin to develop a database of how systems are performing and being maintained throughout Alaska. With an estimated 40,000 onsite systems in operation, these systems are discharging an estimated 19 million gallons per day of domestic wastewater throughout Alaska, yet ESPR has no operational information on the systems.

Stakeholder reception of the expanded permit by rule procedure was generally favorable. The 1,500 gallon per day threshold was established as an equivalent to 10 bedrooms and is also the design population beyond which onsite systems are likely eligible to be registered as a Class V Injection Well with the Environmental Protection Agency's Underground Injection Control program. Stakeholders seemed to favor an online system registration process that allowed a system to be registered and documented with the Department in one step, as well as generating the needed documentation of the Department's recording of the system. This document is pivotal in real estate transactions, and could then be generated quickly by the installing professional, regardless of ESPR engineering plan review backlog or availability of administrative staff to scan in paper applications currently in use.

Stakeholders had reservations, however, regarding the implementation of expiring authorizations. Some stakeholders advised that many property owners simply would not renew their authorizations, even if reminded by automated mailings

and notices. There was concern that property owners would simply defer the renewals until such time that a property transaction was in progress. The lack of renewal response could put the Department in the position of determining how it elects to respond to systems with expired authorizations. Some stakeholders opined this would simply bog down the Compliance and Enforcement program with created violations without sufficient resources to enforce. ESPR is contemplating other triggers for renewal such as property sales (which is the trigger the Municipality of Anchorage uses) that still lead to recurring information from the owners on the system's status. Additionally, one stakeholder commented that the current system may not be broken or in need of revision for authorizations since there has been no indication of illness or injury due to wastewater system failures, nor has there been any data collected on the quality of the groundwater on a large scale.

## Organization of 18 AAC 72

---

ESPR proposed several reorganization concepts for 18 AAC 72 for stakeholder feedback and invited other thoughts on the topic. ESPR explained that over time, regulations become unorganized as portions are repealed, modified, or added and to correct that, a periodic house cleaning must be accomplished. Stakeholders generally agreed the organization of 18 AAC 72 could use improvement.

ESPR proposed reorganizing 18 AAC 72 to designate Article 1 as general topics that are applicable throughout 18 AAC 72. Article 2 would be developed and contain all issues related to the regulatory prescriptive requirements for conventional onsite systems. Article 3 would be reorganized to cover the requirements for engineering plan review. Article 4 would cover approved homeowner and certified installer training requirements. Articles 5 and 6 would still address nondomestic wastewater plan reviews. Lastly, Article 7 would include general provisions.

One important aspect of the reorganization is the development of an Article dedicated to containing all of the regulatory requirements for the installation of conventional onsite systems. Article 2 would fully outline all of the requirements for participation in the expanded permit by rule process described in the section above. Currently, the prescribed requirements are split between 18 AAC 72 and the OWSIM, which is adopted by reference. The intent is to make Article 2 the source for requirements, and eliminate the OWSIM from adoption. The Department would, instead, publish a document of technical specifications and material requirements. The technical specifications could be reviewed and updated annually by the Wastewater Stakeholder Working Group based on material availability in Alaska and feedback obtained during the previous construction season. This will assure the technical and material specifications are continuously up to date with feedback from industry. ESPR also explained that it has insufficient resources to maintain approved products listings. Since individual products cannot be approved, assuring prescribed material specifications are available in Alaska is an essential and needed feedback loop for ESPR.

Stakeholders expressed approval of placing all regulatory requirements in one single source and removing technical and material specifications from regulation. During the Stakeholder Working Group, there was lively discussion on the current technical specifications, and the potential to modify them. Stakeholders also expressed approval of being able to annually review technical and material specifications and provide inputs on deletions, additions, and modifications between construction seasons.

# Specific 18 AAC 72 Suggested Revisions

---

## **Timeline and Expiration of Plan Review (18 AAC 72.225)**

ESPR explained to stakeholders the concerns about the practical application of the two-year term of Construction Approvals listed in 18 AAC 72.225. Currently, 18 AAC 72.225 states a construction approval granted after plan review is valid for only 2 years. If the applicant does not apply for final operational approval within 2 years after the date it issues a construction approval “...the approval is void, and plans must be resubmitted for department review and approval.”

Many larger projects regularly require more than two years to construct. To accommodate this reality, a common practice evolved to consider the conditions in 18 AAC 72.225 met if construction *began* within two years, and would be valid indefinitely until construction was completed. The unintended consequences of this practice is ESPR has hundreds of projects well beyond the 2-year expiry with no information on completion timelines. Additionally, ESPR has received numerous smaller and residential requests for final approvals up to 15 years after construction approval with no contact from the applicant.

Stakeholders understood the requirement for a 2-year expiration. Site conditions, to include neighboring property systems, change frequently as do regulatory requirements, material specifications or treatment technologies. Stakeholders recommended retaining the 2-year expiration, but adding specific language to 18 AAC 72.225 to allow submitting engineers to extend the construction approval. The suggested language would require submitting engineers to assert the site conditions and other requirements have not changed since the construction approval was granted. ESPR could then extend the expiration of the construction approval by another 2 years, as needed. A process of this nature would prevent projects from accumulating in the “pending construction” files for decades or longer.

## **After the Fact Engineering Approval**

It is common to discover wastewater systems operating in various states of repair on properties for which the Department has no prior record. Often, these systems require maintenance to function correctly, or the property is for sale and the real estate financial organizations require Departmental approval documents to complete the financing. In these cases, Professional Engineers typically inventory and evaluate existing systems and compile a report for the Department’s review to adequately document that the system appears to be protective of public health, the environment, and public and private water systems. ESPR has developed customary practices to accept these reports as adequate documentation of wastewater systems, but has no formal regulatory pathway or guidance for stakeholders.

Stakeholders and ESPR staff suggested developing and publishing regulatory requirements for Professional Engineers to document existing wastewater systems for inclusion in 18 AAC 72. This issue would address a common real estate transaction problem where no wastewater approval document is on file and a sale is pending.

## **Engineering Plan Review Level of Rigor (18 AAC 72.205)**

ESPR asked stakeholders for their feedback on the requirement in 18 AAC 72.205(a)(4)(C) to “demonstrate” the system meets minimum design standards, the discharge meets water quality standard in 18 AAC 70, the system protects drinking water sources, and the discharge meets permit conditions, if applicable. ESPR suggested that the requirement to “demonstrate” would require submitting engineers to provide ESPR a body of knowledge or evidence along with the design such that the review engineers could independently arrive at the same conclusion the design engineer did with respect to the above requirements.

ESPR suggested that the word “demonstrate” inflates the engineering plan review rigor because it assumes professional judgement alignment between the review engineer and the submitting design engineer. To relieve some of the rigor in the engineering plan review, ESPR asked for feedback on changing the requirement from “demonstrate” to “assert.” This would allow the design engineer to make a professional assertion under their professional license and seal without the requirement for the review engineer to validate the assertion. The assertion would need to be explicit and without conditions or disclaimer since the four elements contained in 18 AAC 72.205(a)(4)(C) are fundamental tenants of public health and resource protection. Affected stakeholders in attendance seemed to favor this approach.

## **Beneficial Reuse of Wastewater**

ESPR introduced the topic of adding specific language to accommodate beneficial reuse of domestic wastewater. An early consensus among the group emerged that the current regulatory definitions of “domestic wastewater” (18 AAC 72.990(23)) includes graywater, which is the typically targeted resource for beneficial reuse. Additionally, the definition of “graywater” (18 AAC 72.990(35)) specifically excludes fecal, urine, or stormwater constituents from being considered graywater. Stakeholders commented that laundry and bathtub discharges often contain fecal coliform indicators and often sinks contain pharmaceutical residues, all of which indicate graywater may not be a benign stream at all times. Additionally, surface disposal of graywater in cold months could lead to ice formations and large accumulations of treated graywater until the ground thawed each season.

The group agreed that reuse of graywater within the building would be outside of the concern of the Department and ESPR. For instance, capturing graywater to use for toilet flushing would simply be a plumbing issue for the builder. Many property owners are seeking separate treatment trains for the blackwater and graywater they generate to reduce the size and operating costs of their wastewater systems, or produce private compost for personal use.

Some stakeholders opined the separation of graywater and blackwater could adversely impact the biological treatment of the blackwater stream. With the lack of water, the influent becomes very concentrated and there is at least anecdotal evidence this can reduce wastewater system effectiveness. ESPR agreed to conduct literature and other jurisdiction research on the impacts of segregating blackwater and graywater on the treatment, and review graywater treatment and disposal technologies and techniques in similar climates.

## **Delegation of Authority for Utilities (18 ACC 72.280)**

A stakeholder from the municipal utilities sector inquired about delegating project approval to established utilities for wastewater expansion and upgrade projects. The stakeholder group discussed the requirements of 18 AAC 72.280 and agreed most utilities had the required expertise to have plan review authority delegated to them. Currently, 18 AAC 72.280 is written using the term “municipality”, but a suggested revision was to replace “municipality” with “responsible management entity”.

Delegating this authority to a responsible management entity with sufficient technical expertise and capacity could speed the review of routine utility work. Responsible management entities could produce or adopt existing system standards (such as collection system standards) and the Department could review the standards once. From that point on, responsible management entities could simply design to the approved standard. Engineering stakeholders agreed this would be much more efficient because municipalities are already reviewing contract engineer’s designs, and then they are submitted to the Department for additional review.

## **Two Step Domestic Wastewater Plan Review Process (18 AAC 72.200-72.275)**

Stakeholders were asked if the current process of having plans reviewed and approved for construction, and then submitting for final approval to operate was efficient and necessary. Currently, the Department receives engineering plans and once the

review process is complete, it issues an Approval to Construct, which is valid for two years. If modifications are necessary during construction, design engineers can submit modifications to the original design to meet site conditions. Once the system is constructed, the owner, the construction contractor, and the design engineer must assert that the construction was completed as planned, or submit revised record documents depicting the final installation. Once these assertions are received, the Department issues a Final Approval to Operate, which is valid indefinitely.

ESPR discussed with the stakeholder group the potential to conduct domestic plan review similar to the manner non-domestic reviews are conducted. The concept would be a single step. Once the Department reviewed the pre-construction plans, it would issue a construction and operational approval at the same time and complete the process.

Some stakeholders could appreciate the efficiency of a single submittal process and were in favor of the streamlined process. Other stakeholders expressed concern that without final drawings the data on installed systems would be diminished and inaccurate, which is valued information to design systems on neighboring properties. Additionally, some stakeholders suggested that by eliminating the requirement to assert construction details at the end of construction, this type of system could be easily abused by requesting approval for one system and installing another.

## General Concepts for Regulatory Consideration

---

### Expanded Certified Installer Training

During the stakeholder meetings, a common suggestion was to expand the current Certified Installer program to allow these professionals greater authority to install a larger array of wastewater systems without first obtaining Department construction approval. Currently, Certified Installers are limited to domestic wastewater systems of a prescribed construction for residential and small commercial facilities. Many stakeholders suggested that with additional training and certification from the Department, some Certified Installers could install advanced systems in a similar manner.

The Certified Installer program is a permit by rule application process. To accommodate increased range, 18 AAC 72 would need to be revised to add additional prescriptive requirements and develop a tiered certification process. Other stakeholders expressed concern that Certified Installers could be considered as conducting design work, which could be considered practicing engineering without a license.

Additionally, ESPR inquired about the use of national installer credentials and training to augment the training the Department provides. Some stakeholders were familiar with the training requirements. The need for a more focused working group for Certified Installer training and credentials is clear if these changes are to be incorporated in this round of revisions to 18 AAC 72.

### Regulation of Additional Professions

Stakeholders suggested the Department consider regulating, certifying and providing guidance for additional professions which are currently unregulated such as well drillers and septic pumpers/service providers. Stakeholders suggested that certification and training of these professions could assist the Department in ensuring proper sanitary practices are met. Additionally, if septic pumpers and service providers were certified, they could assist in collecting the needed data to renew operational approvals proposed in the streamlined review process. The certified professionals would become additional sensors in the field to provide feedback on the status and performance of wastewater systems.

ESPR explained to the group that Department resources were unlikely to grow. Any additional program expansion would need to be financially self-supporting and require only the additional workload freed by other efficiency efforts. A

stakeholder also pointed out that there are no wide-spread health events associated with wastewater, so there may not be a problem that additional regulation solves.

## Tabulated Revisions

The following table lists numerous suggested revisions to 18 AAC 72.

Citation	Proposed Revision
18 AAC 72.015(c)	Recommend expanding the range of systems Certified Installers, perhaps with advanced certifications, can install
18 AAC 72.020(b)	Address minimum separation distances for components which previously used a different value than current values; also known as “grandfathering”
18 AAC 62.020(j)(1)	Rephrase “...measured during the season of the year...” with “...seasonal high...”
18 AAC 72.035(a)(1)	Add requirement for lifecycle of steel septic tanks
18 AAC 72.040(b)(2) Associated definition	Address conflict regarding residential garage floor drain connection to onsite conventional systems
18 AAC 72.050	Add consideration of disposal of personal care products and pharmaceuticals
18 AAC 72.265(9)(a)	Allow percolation tests to be conducted by trained personnel in addition to professional engineers
18 AAC 72.435(b)(2)	Recommend eliminating need to provide contractor license number and name for construction notification
18 AAC 72.435(c)(1)	Recommend eliminating time requirement (24 hours) to notify the Department of schedule changes outside of the installer’s control
18 AAC 72.990(13)(c) 18 AAC 72.990(14)	Recommend revising definition of community sewer line as “more than two” versus the current “two or more” connected private residences
18 AAC 72.990(16)(D)	Recommend allowing pressurized distribution system be considered a conventional soil absorption system
18 AAC 72.990	Add a definition of “springline” and use consistently throughout 18 AAC 72 and OWSIM
18 AAC 72 All	Recommended evaluating and aligning the definitions and separation distance requirements for stormwater conveyances and drinking water systems.

## OWSIM Suggested Revisions

Stakeholder interest peaked when the group focused on specific revisions to the OWSIM. Some suggestions, such as expanded eligibility of Certified Installers, were broad in nature, and others were very specific to material or technical specifications. The more specific suggestions are tabulated at the end of this section.

### Prescribed Design Flow

The OWSIM currently prescribes 150 gallons per day per bedroom as the design flow for conventional onsite systems installed under the permit by rule method. Professional Engineers can currently design residential systems with different design flows via engineering plan review which accounts for the source of water such as a holding tank or the use of various high efficiency water fixtures and appliances, but that is not currently possible with systems installed via permit by rule. ESPR explained that it polled all other state jurisdictions for their prescribed design flow rates and discovered that 150 gallons per day per bedroom was the most common design value of the 27 states that responded to the poll.

Stakeholders suggested the current design flow prescribed in the OWSIM is too high, especially in homes with cisterns or rain catchment water systems. A stakeholder provided the group the results of a study from the Water Research Foundation which indicated that high efficiency appliances and fixtures have reduced water use by 29%.

## **Garbage Grinder Septic Tank Sizing**

With similar interest in a water appliance, stakeholders commented that the suggested septic tank sizing criteria in the OWSIM (Division 20, Article 2.6) should be eliminated, or integrated into the prescribed tank sizing requirements. Stakeholder feedback pointed out that a garbage grinder is an appliance that can be added, or removed, at the current homeowner's desire. The lack of a garbage grinder at the time of installation for an onsite wastewater system does not prevent the owner from installing a grinder later.

Stakeholders generally agreed the addition of a grinder adds additional solids to the septic tank and that additional volume and hydraulic retention would generally improve treatment. However, the current recommendation in the OWSIM of adding an additional 250 gallons of septic tank capacity can lead to tank sizes that are not available in certain markets. Stakeholders also expressed concern that the sizing is a recommendation. If they elect not to add additional capacity, some stakeholders opined they could be open to increased liability.

## **Insulation Material Specifications**

Many stakeholders expressed concern regarding the Department's material specification for geotechnical insulation products. Insulation is allowed for use in areas where systems cannot be buried deep enough for the soil alone to provide freeze protection. Currently, the OWSIM specifies in Division 20, Article 2.5 that geotechnical insulation must have a minimum compressive strength of 40 pounds per square inch (psi). Many stakeholders opined the 40 psi requirement was unnecessary since the loading from the soil above most insulation would be approximately 4-5 psi.

A stakeholder invited a representative from an Alaska-based company which produces foam insulation products which are suitable for installation in wastewater systems. The representative provided technical performance data on the insulative values of their various products in various compressive strength ranges. It appears the insulative value is negligible between the 40 psi product and lower strength products, and for this brand, plays little role in the adsorption of water by the product.

ESPR advised the working group it would evaluate the purpose of geotechnical insulation and be sure to align the material specification with the purpose. There was some discussion about the insulation supporting a live load above the system, but live load is not discussed anywhere in the OWSIM, which may also need to be added.

## **Organization of OWSIM**

The group was in favor of separating the regulatory requirements in the OWSIM and inserting them into 18 AAC 72. This would leave the OWSIM, or its successor, as a much more concise technical and material specification guide which would not need to be adopted as regulation. The group commented that a specification guide would be much more responsive to changes in materials, available technologies and state-of-the-art concepts if it was reviewed annually by a working group and updated very frequently.

## Tabulated Revisions

Some of the proposed revisions were specific and technical in nature. These suggested revisions are tabulated in summary form below.

Section	Proposed Revision
Div 30, Art 1.2	Consider requiring manholes and risers for better maintenance and cleanout of septic tanks
Div 20, Art 2.1	Consider allowing PVC pipe for use in building sewer lines
Div 20, Art 3.12	Consider deleting maximum grade limit for clarified effluent pipes
Div 40, All	Consider specifying the use of flow splitters versus Tee fittings for distribution of clarified effluent
Div 20, Art 3.20	Consider requiring monitoring tubes in all corners of drainfields to delineate the field boundaries and provide additional methods for testing field functionality. Or consider another method to delineate where field components are on a property. Additionally, consider revising the requirement for monitor tubes or vent pipes in septic tanks if manhole risers are not required.
Div 20, Art 5.2	Consider allowing Certified Installers to conduct and report percolation tests with additional training and certification
Div 20, Art 2.2	Consider reviewing sand liner material specification to allow a greater range of media in Alaska to be used. Also review current procedure for pits to have their media certified by DEC for use.
Div 40, All	Recommend consistent use of terms throughout 18 AAC 72 and OWSIM such as “springline” and “invert” to avoid potential confusion.
Div 40, All	Clarify maximum trench length of 100 feet is measured from point of initial distribution, not 100 feet in total
Div 30, Art 1.6	Consider revising statements regarding the recommendation against pumping unclarified effluent and develop prescribed requirements for handling. Evaluate studies on impacts of macerating pumps on primary treatment as a basis for prescriptive measures.
Div 40, All	Review all notes and text in standard detail drawings to assure well classification is addressed
Div 40, Section 40.02	Consider eliminating the requirement for filter fabric over graveless infiltration chambers.

## Next Steps and Timeline

The feedback, advice, and technical information the stakeholder working group brought to the discussion of regulation revision has been invaluable. Some aspects of the proposed revisions, such as expanded Certified Installer training, will likely require additional meetings specifically regarding these topics. It is for this reason the Wastewater Stakeholder Working Group should not disband at the conclusion of this regulation review process, but remain in place for additional ad hoc topical meetings.

The e-mail listserv vehicle for forming the wastewater group has grown from an initial 14 members in March, 2016 to 91 subscribers in February, 2017. More and more stakeholders are asking to be involved in a proactive manner in helping to shape the regulatory environment in which they work. ESPR intends to keep adding interested parties to the listserv, and its database of registered Certified Installers to send timely and helpful e-mail messages to stakeholders, and also provide a forum for stakeholders to submit comments to ESPR.

Stakeholders were in favor of a comprehensive reorganization of 18 AAC 72 and the OWSIM. This is a large task for ESPR to handle and will require a great deal of manpower to create and edit essentially a new regulation from the ground up. The timeline below was the initial proposed timing prior to the kickoff of the working group. Based on input received from the group, certain aspects, such as the use of renewable permits for onsite systems, may need to be evaluated further. The complexity and depth of the 18 AAC 72 revisions may also require 1 or more months of administrative time to develop without impacting the routine workload of ESPR.

Oct 16	Nov 16	Dec 16	Jan 17	Feb 17	Mar 17	Apr 17	May 17	Jun 17	Jul 17	Aug 17	Sep 17
Stakeholder Working Group					Workgroup Report						
			General Permit (GP) Development Surface/Subsurface Domestic and Domestic-like discharges			GP Public Notice	GP RTC			GP Issued	
			18 AAC 72 Revisions							72 Public Notice	72 RTC
			OASys Development for GP issuance								
										Stakeholder Education	
								Implementation Plan			

ESPR will begin drafting the proposed 18 AAC 72 in February 2017. This will be a “full text” revision document, and not a regulatory edit/revision document. A “full text” document will be readily readable by all stakeholders and staff. ESPR will also hold revision charrettes in March through May 2017 to finalize the disposition on some of the recommended revisions.

Finally, the Department would like to thank all of the participants for their time, professionalism and feedback. We hope to continue working together in the future in order to meet our mission of “*Improving and Protecting Alaska’s Water Quality*”. If you have any questions, please contact Gene McCabe, ESPR Section Manager, at 907-269-7692 or [gene.mccabe@alaska.gov](mailto:gene.mccabe@alaska.gov).

Subscribe to our listserv at: <http://list.state.ak.us/mailman/listinfo/dec.wastewater.systems>

Visit our website at: [dec.alaska.gov/water/wastewater/engineering/](http://dec.alaska.gov/water/wastewater/engineering/)