



ADEQ WATER QUALITY DIVISION MINIMUM DESIGN CRITERIA (18 A.A.C. CHAPTER 5, ARTICLE 5) PATH FORWARD STAKEHOLDER MEETING MINUTES

DATE: January 6, 2020 **Time:** 10 a.m. – 12 p.m.
LOCATION: 1110 W. Washington St., Rm. 3175, Phoenix, AZ 85007

STAKEHOLDER ATTENDEES (attached below)

ADEQ STAFF

Jennifer Peterson
Karen Shanafelt
Nam Ho
Fahmida Maula
Karthik Kumarasamy
John Hunt
Natalie Muilenberg
Jason Bobko

AGENDA

- Introductions
- Current State
- Stakeholder Comments
- Conclusion

CURRENT STATE

Overview of A.A.C. Title 18, Chapter 5, Article 5.

ADEQ is seeking stakeholder comments on the rules governing Minimum Design Criteria for public water systems and related infrastructure, Arizona Administrative Code (A.A.C.) R18-5-502, as well as the other Minimum Design Criteria rules in A.A.C. Title 18, Chapter 5, Article 5. What do stakeholders like about Article 5? What don't they like? What would they change?

STAKEHOLDER COMMENTS

Suzanne Ehrlich (Yavapai County Development Services)

- Commented on changes to/elimination of/reduction to A.A.C. R18-5-505 exemptions

- They cause confusion
- Problems with ACC, which require ATC/AOCs
- Issue for delegation
- What are setbacks for effluent/reuse lines going back out into the community?
- Review A.A.C. R18-5-505(B)(4)
- A.A.C. R18-5-502(C)(1)
 - Include language that references good engineering practices or similar language
- Wants PWS definitions in Article 5 rather than separated out of Article 5
 - They are not delegated to the delegated agencies
 - Not clear in Article 5 what community systems are required to follow these standards
 - Separation of definitions makes it more difficult for everyone to ensure that they are designing a system that is correct

Lori Zito (APS)

- Provide basis and increase baseline on A.A.C. R18-5-505 exemption from \$12,500 to \$50,000+, cannot do much in 2020 for under \$12,500
- Need clarification regarding whether rules apply to PWSs vs. any potable system
 - Wants clarity and consistency for systems that are in between, do the minimum design criteria apply in such cases?
 - Stay consistent with terminology

Steve Christenson (Alpine DWID/Sanitary District)

- Replacing old mains: has own crew who know what work they want to do without engineer
- Putting dollar value on projects need to be looked at
- Low pressure step systems: separation criteria/encasing in concrete is obsolete (look at different materials)
 - HDPE is new technology
- Wants to keep project costs low, systems use own crews and know costs, need to understand costs before setting prices
- Concrete encased DIP is obsolete, need new cost-effective materials:
 - Possibly sleeve with layers of PVC pipe
 - Look at alternative materials
- Minimum Pressure:
 - Need to account for environmental factors
 - Some people are just happy to receive water and have supplemental pumps on their property

Lee Decker (Gallagher & Kennedy)



- A.R.S. 49-353: raising \$12,500 limit may require statutory change
- Is ADEQ considering statutory change?
- A.R.S. 49-353(d)
 - Do the rules allow for a simplified administrative procedure?
- Statue creates issues, thinks ADEQ tried to work with statute as basis for A.A.C. R18-5-505(B)(4)
- A.A.C. R18-5-502(C)
 - Agrees with need for materials list
 - R18-5-502(C)(6)
 - Accounts for language that is outdated
 - Asked about whether ADEQ grants case-by-case exceptions

Brenda Mona (Tipton Water)

- \$12,500 exemption minimum is hard to meet = hardship

Darren Farar (Town of Queen Creek)

- \$12,500 exemption minimum is too low
- Consider \$50,000 for exception
- A.A.C. R18-5-502(C)
 - HDPE pipe should be material that is looked at
 - Method of identifying new technology is great
 - List of materials identified is also helpful
- A.A.C. R18-5-502(B)
 - Minimum Pressure: Consider what minimum pressure requirements should be excluding fire flow
 - Want standard identified for normal operation, separate from what is referenced in Bulletin #10
 - Wants pressure standard written in stone to prevent ambiguity and people from skirting the rule, which happens

Gary Carlson (Carlson Engineering)

- Doesn't appear to be any difference between \$12,500 and \$50,000 threshold from enforcement perspective
- A.A.C. R18-5-505(B)(4) causes confusion
 - Still need to provide name of design engineer, review engineer, and as built
- Adopt APP-type standard, like best available discharge control technology for water/sewer crossings
 - Some type of alternative standard
- Seconds Eric Matson's comments on R18-5-502(C)(1)(a) about confusion between "and" vs. "or"

- Need to clarify what standards they need to follow
- There needs to be restraint in writing any new rules to avoid creating any additional ambiguity

Francisco Galindo (Pima County)

- Water/sewer separation rules are not clear
- What is the purpose of the separation?
- A.A.C. R18-5-502(C)(1)
 - Be clear on acceptable materials
 - What does “and below 2 feet mean”?
 - Only gives option of DIP/encasing in concrete
 - What about PVC?
 - Spending \$3 million per year replacing DIP because the interior protection detaches, you can see the perforation that is inches, water goes around like a river
 - Only thing that works is CIPP (cured in place pipe), but that is costly
 - Provide alternative materials
 - Wants specific language on what to use(i.e. C900 pipe will provide protection)
- Water rules are controlling on sewer rule (sewer rule directs to water rule)
- Wants us to look into Ten State Standards
- Wants rationale why certain design standards were chosen
 - Thinks DIP was chosen to take 350 PSI at joints
 - PVC provides protection that is necessary for water/sewer separation
- Need to take risks/what is the likelihood of rupture, cannot overdesign to the expense of the public
- DIP is expensive, especially for crossings
- Water/sewer separation says to use best practices, calls Bulletin #10 best practices
 - Bulletin #10 says that when sewer crosses above water need 2’ separation and sewer needs to be DIP, doesn’t say that water needs to be DIP
 - A.A.C. R18-5-502(C)(1)(b)
 - Telling him that it should not be placed in an area between bottom of sewer and top of line unless extra protection is provided, so telling him that if the water line is more than 2’, then no extra protection is required
 - Point is that rule is confusing
 - Have been using common practice to replace with DIP
 - Needs clarification, need to show purpose and need on why we are doing things
- Supports Richard Sarti’s position, providing safety and safe drinking water, but there are other alternatives that would provide the same level of safety

- Need to look into other options (i.e. protection of systems could be water lines built with DIP with mechanical joints)

Jami Erickson (Phoenix Water services)

- Seconds Pima County comment on confusion re: A.A.C. R18-5-502(C)
 - Does “and” mean both, does “and” mean or
 - A.A.C. R18-5-502(C)(1)(b)
 - Confusing language with “and”, different than MAG standard
 - Experiencing DIP failures, using CIPP lining
 - Looked at alternative materials
 - MAG standard (2017) 610.5
 - A.A.C. R18-5-502(C)(1)(a)
 - Concern is if you are putting in water line above sewer, you need to dig down and expose sewer line to encase the sewer line, which puts sewer at risk
 - Consider alternative technologies, like double encasement with water line restrained or similar where you don’t need to expose the sewer to get under the line to encase it
 - More feasible because exposing/trying to get under sewer line risks contamination

Richard Sarti (Tucson Water)

- Confirmed that he sent email to John Hunt
- Tucson Water wants to provide safe drinking water and stewardship over system
- Wants to avoid sewer failures
- Understands that DIP causes problems
 - That C900 PVC used as replacement
 - Concerned with maintenance costs of PVC
 - Likes DIP because it provides resilience and toughness against maintenance damage/backhoe damage
 - Directional boring can also damage PVC vs. DIP, which won’t be damaged
- Looking for assurance against sewer failures
- Concerned about maintenance requirements
- Wants PVC encased in steel, wants something more than PVC, wants resilience/toughness of DIP
- Maybe another lining would be more effective
- Goal is to both meet wastewater requirements but still ensure safety of drinking water and infrastructure
- Wants maximum amount of protection
- There is a significant chance of ruptures at crossings
- Look into/proffer other materials

- Fiberglass reinforced pipe, Hobas pipe may work
- Best of both worlds
- Acknowledges need for A.A.C. R18-5-502(C)(6)
- Separation rule needs clarification
 - What about situations where there is a skew?
 - Materials choices need to be chosen in terms of perpetuity and public health and safety, and certainly the safety of drinking water needs to be a top and very strong priority
- Water is using DIP with mechanical joints, but still thinks there has to be a requirement for extra protection on the sewer line
 - Extra protection could be pipe material, different types of encasement
 - Debate is what constitutes extra protections
- Wants to be involved in the process

Kent McRae (Pima County Regional Wastewater Reclamation Department)

- Use other state standards, i.e. using PVC sewer over water lines, place responsibility of waterline protection on water system
 - Confirmed that he provided Texas letter to ADEQ stating same
- Criteria defined for protection of water against cross contamination from sewer is in Bulletin #10
 - 1978 standards need to be updated
 - Can always one-up Bulletin #10
 - Need to find not the absolute best, but what we can justify
- There are stronger pipes than DIP
- Ten State Standards allows for PVC sewer above water lines
- A.A.C. R18-5-502(C)(6)
 - Appreciates opportunity to submit report
 - Knowing what right looks like can be a really expensive proposition
 - Wants ADEQ to define what “right” looks like and the format they need to submit
 - Should be apparent that what they are submitting is adequate to ADEQ
 - Doesn’t need to be extensive, but should be clear
 - Best engineering practices opens it up to the imagination
 - Doesn’t necessarily want another 10 materials added, wants practices added that to align with Gilbert, Mesa, Phoenix
- Points out that Bulletin #10 calls for 18” and A.A.C. calls for 2’, wants to know why the discrepancy, also wants to know why other states have 1’ separations vs. 18” and 2’
 - What is driving the differences?

Lisa Jackson (Arizona Water Company)

- There is a need to update Bulletin #10 to account for new technologies

Can Xiao (City of Phoenix)

- Is there a requirement for temporary water systems to obtain AOC/ATC?
- Wants clarification on like-for-like exemption

Eric Matson (Maricopa County)

- Agrees with comment on A.A.C. R18-5-502(C)(1)(a) – language is difficult to interpret
 - There have been multiple interpretations
 - Differs from MAG
 - There is confusion on separation distances
 - Water/waste water rules are correlated but equally confusion
 - Will have to make commensurate changes in A.A.C. Chapter 9
 - Use of “and” vs. “or” needs to be cleaned up
 - Language that requires use of A.A.C., MAG, and Pima County detailed drawings and specifications
 - Languages requires following two codes that don’t always agree
 - Seeing increased number of very tight developments, developers are calling them casitas developments, sometimes multiple duplexes, looks like subdivisions, but developers call them condominiums and say A.A.C. is not applicable, plumbing code is applicable. Plumbing code is very different than A.A.C.
 - See 10 homes connected to 4” sewer service line with multiple 90 degree bends, some only four feet apart with no manholes and no cleanouts
 - The concern is that if you allow default to plumbing code, plumbing code allows for closer separation distances between water and sewer
 - Regardless of terminology, they are using different criteria to size mains and determine separation distances
 - Seeing a lot of this type of development
- A.A.C. R18-5-502(D)(3)
 - If you had wastewater treatment plant that was discharging reclaimed effluent into recharge well at 3,000GPM, could you not place a potable well just outside of 100’ from APP discharge of effluent?
 - Is the science there to say that’s ok?
 - Wants ADEQ to look into that

Jennifer Lynch (Pima County)

- Supports Francisco’s position that Pima County would like to have more types of materials and construction methods added to A.A.C. 502

Unknown commenter

- A.A.C. R18-5-505(b)(2), (3), and (4)
 - Can be cleaned up a little better
- Energy is spent trying to get the exception
- Wants county processes to mirror ADEQs process

CONCLUSION

John Hunt provided his contact information for stakeholders to continue to submit comments. He stated that ADEQ will consider this input in determining whether ADEQ should move forward with asking Governor Ducey for an exemption from the rulemaking moratorium.

John Hunt reviewed the tentative timeline and noted that stakeholders should expect to receive information should ADEQ move forward.

John Hunt noted his appreciation of attendees' time and participation in the process.

Meeting adjourned at approximately 11:20am.

STAKEHOLDER ATTENDEES

NAME	ORGANIZATION
Richard Sarti	Tucson Water
Brenda Mona	Tipton Water
Mike Gerstenberger	Pima County Regional Wastewater Reclamation Department
Francisco Galindo	Pima County
Jennifer Lynch	PDEQ
Arturo Burgos	ASARCO
Andy Haas	Arizona Water Company
Chris Connor	City of Chandler
Mustafa Muradvich	MCESD
Pete Espericuenta	City of Phoenix
Jami Erickson	City of Phoenix
Lori Zito	APS
Tim Bodell	HUC
Jo-Anne Barcellano	MCDEQ
Lisa Jackson	Arizona Water Company
Suzanne Ehrlich	Yavapai County
Christina Hoppes	City of Tempe
Haley Archambault	Arizona Water Company
Michael Huber	Town of Queen Creek
Mark Weber	Tempe
N. Emery Layton	EWL
Kent McRae	Pima County Regional Wastewater Reclamation Department
Earon Shepard	SWL
Stephen Dean	Marana Water
Steve Christensen	Alpine DWID
Eric Matson	Maricopa County
Yu-Chu Hsu	City of Phoenix
Can Xiao	City of Phoenix
Stacey Kisling	City of Phoenix
Lauren Carns	Maricopa County
Natalie Chrisman	APS
Greg Carlson	Greg Carlson Engineering
Jamie Pesqueira	City of Tempe
Richard Hacker	Arizona Water Company
Darren Farar	Town of Queen Creek



Lee Decker

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Stu Kimball

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