

**ATTACHMENT A – STAFF REPORT – AMENDMENTS TO 82-186  
5/14/2019**

**I. Chart**

The following chart identifies existing provisions that are proposed to be amended and/or relocated according to the proposed structure set forth in section 3 of the staff report. Where applicable, it also provides references to the policy recommendations of the County’s Water Advisory Commission (“WAC”) and the Board’s adopted water priorities, both of which form the basis for the proposed revisions.

<b>Existing Provision</b>	<b>Subject Matter</b>	<b>Proposed New Provision</b>	<b>Key Changes</b>	<b>Technical Justification (if applicable)</b>
82-186(I)	Reference to state law requiring sufficient water supply for subdivision approval	82-186 (I)(A)-(B)	Expanded to include policy statement and legal basis for requiring water of adequate quantity and quality for new land uses. <i>WAC Policy Bulletin #2, June 11, 2015, at 5 (promoting application of same regulations to commercial and residential development)</i>	
82-186(I)	Requires proof of adequate water supply for subdivisions and Class I and Class II land use projects, and excepts development not requiring a land use permit.	82-186 (I)(C)	States that water quantity and quality standards apply to all new development, except for development that does not require a land use permit; lot consolidations; boundary adjustments; special events; and temporary uses. <i>WAC Policy Bulletin #2, June 11, 2015, at 5 (promoting application of same regulations to commercial and residential development); Board Priority #3 (encourage water sensitive land use planning)</i>	Boundary adjustment simply reconfigure property lines, and do not result in additional lots (i.e. additional demands), therefore quantity or quality standards are not needed.  Lot consolidations combined one or more lots, and do not result in additional lots (i.e. additional demands), therefore quantity and quality standards are not needed.  Special Events and Temporary Uses typically occur over very short periods

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				of time (one day or weekends) and therefore water demands are typically met by providing bottled water and use of port-a-lets for sanitary sewer, therefore quantity and quality standards are not needed.
82-186(I)	For projects served by central water from a commercial or municipal water provider, water adequacy for Conceptual Development Plan approval may be established by notice of the water provider’s capacity and intent to serve the project, but that tap reservations or purchases are required for subdivisions, Class I, and Class II projects	82-186 (III)(A)(1) (a)-(b)	For projects served by a central water supply system, <sup>1</sup> requires written notice of provider’s capacity and intent at Conceptual Development Plan/preliminary plat stage, and firm commitments for water delivery (tap purchase or non-revocable reservation) prior to permit issuance or final plat recording. <i>WAC Policy Bulletin #2, June 11, 2015, at 2 (“T]he [WAC] believes that taking measures to ensure that an adequate, clean and safe water supply is available to serve a project’s constituents is vital to addressing the County’s water resource issues, now and in the future); Board Priority #3 (encourage water sensitive land use planning)</i>	Requiring tap reservation or purchase at the time of preliminary plat is not desired because project approval at the time of preliminary plat (i.e. hearings) is unknown, staff would prefer to not require the financial commitment of tap purchase at preliminary plat. Tap purchase/reservation will be required prior to final plat. If taps are not purchased or reserved the plat will not be recorded and the subdivision will not be finalized.
82-186(I)	For projects (except Conceptual Development Plans or preliminary	82-186 (III)(B)	Carries forward the same requirement <sup>2</sup> but replaces “domestic wells” with	Temporary or Substitute Water Supply Plans not

<sup>1</sup> Staff also proposes a new definition of “Central Water Supply System”: “a system for supplying water from a common source or sources to all dwellings and other buildings within a development. The water supply source may be located on-site or off-site.”

<sup>2</sup> A new definition of “private surface water system” also is proposed, i.e.: “a Central Water Supply System providing surface water to one or more structures and/or parcels, which is not otherwise subject to review and/or approval by the County or any other appropriate jurisdictional agency, e.g., Division of water Resources or the Colorado Department of Health and Environment.”

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	plats) served by a private surface water system or domestic wells, legal (“paper”) water may be established through verification of decreed water rights, including any augmentation plans.	(1)-(3)	“groundwater,” with the newly adopted specification that a temporary or substitute water supply plan will not meet the subsection’s requirements. Further, it applies certain criteria, set forth in other subsections, to private surface water systems, pursuant to WAC recommendations. <sup>3</sup>	providing adequate water supply was adopted into to LPLUC §82-186 via Project 2018-0237 and Resolution 2018-40.
82-186(II)	Water demand for all projects estimated at 350 gallons per day (gpd) per dwelling unit, subject to specified exceptions.	82-186 (II)(C)	Carries forward general 350 gpd estimate for residential demand, specifying that that estimate accounts for in-house and outdoor demand.	
82-186(II) (A)-(B)	In-house demand for dwellings is estimated at 195 gpd or 75 gpd per capita; outdoor is estimated at 210 gpd.	82-186(II) (C)(2)	Carries forward estimated 195 gpd in-house per dwelling and adds a new policy statement and estimation guidelines re: outdoor demand for multifamily dwellings with less than 1,500 square feet of irrigable area per dwelling. The purpose is to incentivize water conservation in high-density residential development. <i>Board Priority #7 (support conservation efforts)</i>	This proposed amendment allows multifamily proposals to reduce estimated demand in providing smaller lawns or irrigation common areas.  This provision was not applied to single family dwelling units, due to the complexity of enforcing such a provision for single family lots.
82-186 (II)(C)	Offers applicants an alternative for the standards residential demand estimates through preparation of a site-specific demand study.	82-186(II) (E)	Carries forward the alternative but promulgates specific requirements for the site-specific demand study’s preparation and contents. Adds a policy statement encouraging inclusion of water conservation measures in all such studies. <i>WAC Policy Bulletin #2 at 4 (“[T]he WAC believes that the County should</i>	For uses that either want to include conservation measures or uses that have very site-specific water demands, this alternative will allow the applicant to develop estimated demands, rather than requiring staff to apply

<sup>3</sup> For itemization of those criteria and relevant WAC recommendations, see the discussion below of section 82-186(IV)(C).

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			<i>promote good stewardship through the use of incentives and by raising public awareness.”); Board Priority #7 (support conservation efforts)</i>	residential standards as a surrogate.
82-186 (II)(D)	Offers another alternative for domestic water systems to use historical use data if ten or more consecutive years of reliable data exist	N/A	Staff recommends eliminating this alternative in favor of established estimates and the alternative of a site-specific demand study, to avoid the uncertainty of projecting historical usage onto future development, given the difficulty in predicting changes in water availability, cost, practices, and infrastructure.	
82-186(II)	“Non-household water demand shall be calculated in addition to household demands using best professional judgment.”	82-186(II) (D)	These revisions generally strive to provide more clarity and guidance for non-residential development. Because EPA and CDPHE standards/estimated demand figures exist for many commercial and industrial uses, this section contains a table with use-specific estimates. Applicants who disagree with those estimates may prepare a site-specific demand study. Certain uses, e.g., gravel pits, whose water demand may vary beyond what reasonably may be estimated, are required to perform a site-specific demand study for all applications.	For some uses outlined in the EPA/CDPHE estimated demands, the demand is based on an average water use for the demand divided by an easily counted measure. For example, Hospital use is 250 gpd./bed space. The patient in each bed space does not use 250 gpd, rather the entire demand for the entire hospital has been averaged and divided by the number of bed spaces. This unit measure allows for scalability based on an easily measurable unit (bed spaces).  The table also allows for an “a la carte” option for additional fixtures. For example, an office building typically has

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				restroom facilities, which is accounted for in the 15 gpd/employee. If the office also installs a shower, that would add another 15 gpd for that fixture.
82-186(III)	Groundwater Quantity Standards – this subsection contains criteria for establishing the availability of physical (“wet”) water for projects proposing groundwater as their water source	82-186(IV)	This section consolidates the criteria for establishing the availability of physical/wet water for all water sources.	
82-186(III)(A)	Allows Class I and residential administrative land uses proposing to use groundwater to establish physical/wet water availability through verification of a legal/paper water supply.	82-186(IV)(A)	Aquifer data and/or testing is required for all projects proposing to use groundwater, and basic standards for all such testing are prescribed. Many projects currently permitted as Class I uses (e.g. child care centers, offices in the AVLUP) may still entail high water consumption This requirement ensures the actual availability of groundwater and that applicants will exercise their water rights through drilling a productive well, rather than supplying development with hauled water. <i>WAC Policy Bulletin # 2 (“[T]he [WAC] believes that many of the County’s regulations should be amended to require more stringent ‘proof of water’ for proposed subdivision and commercial projects.”)</i>	
82-186(III)(B)	Provides that for Class II uses, the requirements to establish adequate water supply shall be determined by	82-186(IV)(A)	This section eliminates the uncertainty associated with a case-by-case determination of adequacy criteria and instead applies the same set of basic and	

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	the planning engineer upon a case-by-case review of each application.		heightened criteria based on the project’s estimated demand.	
82-186 (III)(C)	Requires aquifer data and/or testing for subdivisions served by individual wells	82-186 (IV)(A)	Carries forward this requirement	
82-186 (III)(D) and (IV)	For development proposing two or more residential units using a shared well, requires a professionally prepared water design and operations plan	82-186 (IV)(C)	A new, separate section carries forward the requirement for professional plans and specifications for groundwater <i>and</i> shared private surface water systems, including a system maintenance plan. Adds requirement for metering for each residence/use. <i>WAC Policy Bulletin #2 at 3 (“[A]pplicants who will not be obtaining water from a third-party water system should be required . . . to develop a system maintenance plan and identify a responsible party for carrying out the plan [which] must include basic criteria established by the County.”)</i> (“Further, metered taps should be required for all subdivision projects); Board Priority #1 (develop and maintain infrastructure); Board Priority #7 (support conservation)	Consolidates the requirement for professional plans and specifications into one location.  Requires metering of shared systems to potentially encourage conservation, by making end users of water systems aware of their own personal consumption.
82-186(IV)	This existing section sets forth well/aquifer testing criteria depending on the type of development and water source proposed (i.e., MES, preliminary plats, existing vs. new well, number of lots in subdivision).	82-186 (IV)(A) (1)-(3)	The proposed revisions also promulgate well/aquifer testing criteria, but, rather than applying those criteria based on the type of development, application depends on the estimated water demand. Thus, the stringency of criteria increases relative to the volume of estimated water demand. <i>Board Priority #3 (encourage water sensitive land use planning)</i>	2.2 gallons per minute derived from 1,050 gpd threshold for 8-hour pump test (2.2 gpm x 8 hours = 1,056 gpd = approx. 1,050 gpd threshold for 8-hour pump test).
82-186 (IV)(A)(1)	For MES and preliminary plats proposing to use an existing well in	82-186 (IV)(A)(2)	For projects with an estimated demand of 1050 gpd or less, data on an existing	If proposed uses do not increase water demand, no

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	production for a minimum of one year, groundwater adequacy may be established through information about the existing well's current and historical production rate.	(a)	well will satisfy water adequacy criteria only if the well has been operating for one year or more and the anticipated development will not increase the water demand. <i>WAC Policy Bulletin #2 at 3 (“[T]he [WAC] recommends that County regulations require all applicants proposing to use a new well or an existing well in which water demand will increase to complete an 8-hour pump test.”); Board Priority #3 (encourage water sensitive land use planning)</i>	pump test required. Only verification of well permit and well information. Accessory uses which are operated by the owner would likely not increase water demand and have little impact.
82-186 (IV)(A)(2)	MES and preliminary plats of four or fewer lots (i.e., with a demand of than 1400 (350 x 4) gpd or less, which propose a new well must conduct an 8-hour constant-rate pump test. In practice, the planning engineer applies the 1400 gpd cutoff to commercial and industrial projects.	82-186 (IV)(A)(2) (b)	For projects with an estimated demand of 1050 gpd or less that propose to use a new well, or a well in operation for less than one year, an 8-hour constant rate pump test is required. <i>Board Priority #3 (encourage water sensitive land use planning)</i>	Threshold for hydrogeologic study reduced to 1,050 gpd. Exempt well permits issued by the Division of Water Resources typically allow for up to 3 residential units to be supplied by the well. The use of 1,050 gpd (3 homes x 350 gpd) will align the threshold with exempt well permits. Additionally, Minor Exempt Subdivisions (MES) are exempt from full subdivision regulations, which also aligns with 1,050 gpd.
82-186 (IV)(B)	For projects proposing 5 or more residential lots (i.e., with a demand of greater than 1400 gpd) a comprehensive hydrogeologic report and water balance estimate must be prepared. In practice, the planning engineer requires the same report and estimate of commercial and	82-186 (IV)(A)(3)	A comprehensive hydrogeologic report and water balance estimate is required for all projects with an estimated demand of more than 1050 gallons per day. Basic and potential additional testing requirements are stated explicitly. Staff recommends decreasing the threshold for the hydrogeologic report	Threshold for hydrogeologic study reduced to 1,050 gpd. Exempt well permits issued by the Division of Water Resources typically allow for up to 3 residential units to be supplied by the well. The use of 1,050 gpd (3 homes x 350

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	industrial projects with an estimated demand of greater than 1400 gpd.		requirement from 1400 to 1050 so that the threshold can be tied to the 3-lot maximum (350 x 3 = 1050) for Minor Exempt Subdivisions. <i>Board Priority #3 (encourage water sensitive land use planning)</i>	gpd) will align the threshold with exempt well permits. Additionally, Minor Exempt Subdivisions (MES) are exempt from full subdivision regulations, which also aligns with 1,050 gpd.
82-186(V)	This section prescribes protocol for well construction and testing	82-186 (IV)(A)(4)	Carries forward, but reorganizes and clarifies, well construction and testing protocol, and promulgates specific requirements for the contents of a hydrogeologic report.	
82-186(VI)	Prescribes surface water quantity standards; for private water systems serving a single lot or use, paper water is sufficient. For systems serving two or more lots, and serving uses requiring a Class II permit, a study is required to must estimate the project’s water demand and demonstrate that the paper water is sufficient in quantity and seniority to meet those demands in times of minimum flows (i.e., a safe-yield analysis).	82-186 (IV)(B)	Carries forward a firm-yield analysis, which satisfies specified criteria, for all development supplying its water from a private surface water system. <i>WAC Policy Bulletin # 2 (“[T]he [WAC] believes that many of the County’s regulations should be amended to require more stringent ‘proof of water’ for proposed subdivision and commercial projects.”); Board Priority #3 (encourage water sensitive land use planning)</i>	Use of firm-yield is a more acceptable/common term, rather than safe-yield.
82-186(VI)	This section also requires a professionally designed operations plan for share private surface water systems	82-186 (IV)(C)	A new, separate section which carries forward the requirement for professional plans and specifications for groundwater <i>and</i> shared private surface water systems, including a system maintenance plan and metering for each residence/use. <i>WAC Policy Bulletin #2 at 3 ([A]pplicants who will not be obtaining water from a third-party water system should be</i>	



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			<i>required . . . to develop a system maintenance plan and identify a responsible party for carrying out the plan [which] must include basic criteria established by the County.”); Board Priority #1 (develop and maintain infrastructure)</i>	
82-186(VII)	All projects must submit water quality data for preliminary plat approval.	82-186(V)	Specifies that this requirement applies to all development, and not only to subdivisions; <i>WAC Policy Bulletin #2 at 4 (proof of water quantity, water quality, operations and maintenance and conservation should be required of all major projects, such as commercial Class II projects and subdivisions), Board Priority #6 (protect water quality)</i>	Currently water quality testing is required for all development, however this requirement is currently housed in the code relative to residential development.
82-186 (VII)(A)	Lists constituents for which water samples must be tested	82-186 (V)(A)	Provides a list of constituents for testing derived from CDPHE’s primary drinking water standards, in an alphabetized table. <i>Board Priority #6 (protect water quality)</i>	Provides a more complete list of primary drinking water standards, in alphabetical order.
82-186 (VII)(B)	Requires recording of water quality data with the plat.	82-186 (V)(B)-(C)	For subdivision lots served by private individual wells, exceedances to the MCL must be described in a plat note. All other types of Development must develop a treatment plan. if constituents exceed the CDPHE’s Maximum Contaminant Levels (MCLs) <i>Board Priority #6 (protect water quality)</i>	If a property proposed for subdivision has an existing well, this well may be used as a surrogate for water quality for the future wells developed on the future lots. If tested constituents are tested and exceed MCLs, a plat note will be added as a notice to future parcel owners.
82-186 (VII)(C)	If any constituents exceed MCLs, the applicant must prepare a plan detailing mitigation measures that will render the water supply a safe drinking water source.	82-186 (V)(D)	This requirement is carried forward without significant change.	For all other projects, the existing/new well that was tested for the project application exists and

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				therefore treatment will be a requirement.
82-186(VIII)	This subsection requires development using shared water supply systems to create a legal entity to administer and operate the water supply.	N/A	This requirement is eliminated pursuant to the WAC’s recommendations. <i>WAC Policy Bulletin #2 at 3 (“The [WAC] believes that current requirements . . . for creation of a legal entity to administer and operate the water supply . . . are too stringent . . . Instead, applicants who will not be obtaining water from a third-party water system should be required . . . to develop a system maintenance plan and identify a responsible party for carrying out the plan.”)</i>	
None	Transfer of title water quality testing	82-186(VI)	This provision is new and requires owners of property served by existing wells to have the water supply tested at least 12 months prior to arms-length sales to third parties and to provide the testing results to the prospective purchaser. ( <i>WAC Policy Bulletin #2</i> )	
82-186(III)(E)	Cistern and hauled water	82-186(VII)	Carries forward existing language	
None	Standards and Specifications for Water Deliver Systems	82-186(IX)	This section will be new and is reserved for the adoption of uniform pipe standards	