1719 Circle Road
Powdersville, SC 29642
Phone: (864) 404-2107 Fax: (864) 295-1496
twyatt@powdersvillewater.org
www.powdersvillewater.org

Development Policy

and

Procedure Manual

Revised August, 2022

PREFACE

The purpose of this manual is to provide guidelines for the orderly installation of new water infrastructure in an effort to meet the growing needs of the development community in the service area of Powdersville Water (PW). These guidelines were written to be flexible enough to accommodate the individuality of each project while maintaining high construction standards and orderly procedures. Each project must be handled in a professional manner so that the system design and construction standards are met. PW understands that efficiencies developed into this process ultimately save time and expense to the developer. Developers are valued customers of PW. This policy is in place to ensure that we provide efficient and quality customer service to the development community and that we construct quality infrastructure that ultimately becomes part of the PW water system that remains their property in perpetuity. Developers are encouraged to familiarize themselves with this policy prior to submitting construction projects to PW for approval. Your familiarity with the development process will only save you time and money. We hope that you find this manual to be a helpful resource in doing business with Powdersville Water.

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CHAPTER 1: GENERAL

1.1-Introduction

The following policies and procedures apply to all public water related activities being undertaken by developers in the service area of Powdersville Water (PW). The provisions of this manual apply to all such activities.

1.2 - Interpretation of Certain Terms and Words

Except as specifically defined herein, all words used in this manual shall retain their customary dictionary definitions. For the purposes of this policy, certain words or terms used herein are defined as follows:

1. Words used in the present tense include the future tense.

2. Words used in the singular include the plural and words used in the plural include the singular.

3. The word **"shall"** is always mandatory.

4. The word **"may"** is permissive.

5. The word **"lot"** includes the word "plat" or "parcel".

6. The word **"person"** includes a firm, association, organization, partnership, trust company, or corporation as well as an individual.

1.3 - Definitions

1. **Contractor** - A person, firm, corporation or other legal entity authorized to perform construction by the State of South Carolina Licensing Board for Contractors. A contractor may not perform work outside of his licensed capacity.

2. **Density** - Density is defined as the number of REU's per acre.

3. **Development** - The performance of any building operation; the making of any material change in the use of any structure or land; or the division of land into two (2) or more parcels.

4. **Developer** - Any person, firm, corporation, or other legal entity improving property for commercial, institutional, industrial or residential purposes.

5. **Developer Agreement** - A written agreement between PW and a developer that provides for specific procedures that apply to a particular development. Developers of projects are encouraged to meet with PW during the planning stage to discuss the applicability and desirability of a developer agreement.

6. **Easement** – A right afforded to PW to use another's real property to access the water infrastructure for operation, maintenance or construction activities.

7. **Engineer** - A person currently licensed as a Professional Engineer by the South Carolina State Board of Registration for Professional Engineers and Land Surveyors; Division of Occupational and Professional Licensing; Department of Labor, Licensing and Regulation.

8. **Land Surveyor** - A person currently licensed as a Land Surveyor by the South Carolina State Board of Registration for Professional Engineers and Land Surveyors; Division of Occupational and Professional Licensing; Department of Labor, Licensing and Regulation.

9. **Lot** - A single parcel or tract of land that has been subdivided for the purpose of building a residence or commercial facility.

10. **Parcel** – A portion or plot of land, usually a division of a larger area that has been recorded with the appropriate county

11. **Plat** - A map or drawing upon which the development is presented for approval.

12. **Project** - Water construction activities undertaken in accordance with this policy.

13. **Public Right-of-Way** - County or state road right-of-way.

14. **Residential Equivalent Unit (REU)** - A unit of measure established by PW that equals the estimated maximum daily water consumption for a typical residential unit. Following SCDHEC's guidelines, water consumption is calculated at 300 gallons per day (GPD) for a single-family home. One REU equals 300 gallons per day (GPD).

15. **SC DHEC Approval to Place in Operation (formerly Permit to Operate)** – A permit issued by SC DHEC that authorizes usage of a new water and/or sewer infrastructure improvement.

16. **Service Authorization** – A letter of acceptance written by PW assigned agent to SC DHEC after new construction is completed stating that new water infrastructure will be owned, operated, and maintained by PW from that point forward.

17. **Subdivision** - The division of a tract, parcel, or lot into two or more lots, building sites, or other divisions for the purpose of immediate or future sale, or building of a development, etc. Subdivision shall also refer to uses of land not ordinarily considered a subdivision but requiring utility installations. Examples of these uses are mobile home parks, multi-family projects, townhouses, apartments, and planned unit developments.

18. **Exclusive Utility Right-of-Way** - Private right-of-way granted to PW which is not dedicated to the public, but for the exclusive use of PW.

CHAPTER 2: DEVELOPMENT PROCEDURES

Preface: These procedures shall be followed by developers who plan, design and/or construct any water infrastructure that will eventually be owned by PW. Depending upon the size and scope of the proposed project, some of these procedures may be modified by PW. If the development requires an individual tap with no significant system improvements, please follow the procedure as outlined in Section 2.6.

2.1 - Procedures and Activity Sequence

Administrative fees will be charged in accordance with the fee rates and charges outlined in Appendix A. The development sequence is as follows:

1. Submit a fully completed Water Availability Request and Conceptual Plan to PW, followed by PW's Response (Section 2.2.1 and 2.2.2)
2. Submit a Preliminary Plan and schedule a Pre-design Meeting (if required) (Section 2.2.3)
3. Delivery of Cost Estimate to the Developer (Section 2.2.4)
4. Designation of Wastewater Disposal for the development (Section 2.2.4)
5. Construction Design & Permitting (Section 2.2.6)
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2.2 - Water Availability

2.2.1 Water Availability Request

The first step required of a developer is to submit a request for Water Availability in the distribution system owned by PW (See Appendix B) for any proposed project other than a single-family home. The completed request form and appropriate fee (See Appendix A) must be forwarded to the Project Coordinator, Powdersville Water, 1719 Circle Road, Powdersville, S.C. 29642. Project review will not begin until this information is received with significant detail. A partially completed form will be returned to the sender.

2.2.2 Conceptual or Site Plan

The developer must **submit a conceptual site plan or preliminary design** of the proposed development with his availability request. Preferably, the plan should include the following:

1. North arrow, location map, and scale.

2. Parcel boundaries and total acreage.

3. Proposed street and lot arrangement or the number of proposed lots (to include proposed construction phasing).

4. Building footprint(s)if commercial development.

5. Existing and proposed land uses throughout the subdivision.

6. Designation and distance of any State or County roadways adjacent to or near the property.

7. Fire protection needs (if known)

2.2.3 Preliminary Plan Submission/Pre-design Meeting (if required)

Should PW, upon review of the availability request, decide the project is of sufficient magnitude to require a preliminary engineering plan, PW will require submittal of two (2) sets of preliminary engineering plans prepared in accordance with the requirements below. PW may require the developer and engineer to attend a pre-design meeting to discuss the provision of water service prior to preparing the preliminary plan. **This process will only be required for large scale developments or those that are complex in nature**.

Preliminary Plan Requirements (if required)

1. All Preliminary Engineering Plans should be prepared by a S.C. licensed professional engineer and should include his/her seal and signature certification. Otherwise, all design decisions will be made by the engineer of PW's choice.

2. The preliminary plan of the proposed development should be clearly and legibly drawn to a scale no greater than 1" = 10'-0" and no less than 1" – 50'-0".

3. Elevations on all submitted plans shall be based on NAD 1983 State Plan SC, HARN.

4. A project map indexing the orientation of multiple sheets with match lines should be included if the plan set requires more than one sheet. Orientation of project maps shall be maintained on all subsequent sheets.

5. A minimum of ½", maximum of 1" plan overlap is required beyond a match line. Avoid the splitting of a lot or street intersection to accommodate a match line.

6. A vicinity or location plan should be displayed for the purpose of locating the property being developed showing relation to adjoining property, all streets, roads, municipal boundaries and recorded subdivision(s) within 1,000 feet of the property.

7. For each sheet set submitted, the following data should be submitted on the title block: title of project, title of sheet, individual sheet number, plan date, scale used, engineer name, address, telephone number and a revision block showing date and description of each revision. Both title of project and sheet number shall be located on the lower right corner of the 24" x 36" sheet.

8. A north arrow should be located on each of the plan sheets.

9. The legal name of the owner, mailing address and contact person should be furnished on the plans.

10. Proposed tract boundaries of the property being developed and total acreage of property being developed should be shown.

11. The layout of all lots, streets, roads, alleys, public crosswalks and road names should be included, if available. The total number of lots, lot numbers and the usage designation (i.e., single family, multi-family and/or commercial) of each lot should also be shown.

12. Once utility construction begins, lot lines may not be changed without written approval of PW. **If the lot lines are altered any time after the construction contract is signed, the developer shall be responsible for any and all costs related to the moving of service laterals, or other water infrastructure, modifying as-built record drawings and/or any other expenses associated with the modifications of the property (including any grade changes over water infrastructure that has been installed).** It is extremely important that all new development be constructed as close to approved plans as possible. Any exceptions must be approved by PW prior to any field changes occurring during or after the construction process.

13. In the case of re-subdividing property within approved developments, a copy of the existing plat must be submitted with proposed re-subdivisions superimposed thereon. No modification may occur until all parties are in agreement with the modification plans.

14. The location and names of streams, lakes, swamps, and wetlands and any other water bodies shall be shown that are part of the property. Areas subject to flood must be designated. M.S.L. elevations of areas where major system appurtenances (i.e., pump stations, main valve clusters, etc.) are proposed shall be indicated.

15. Locations of any fire protection systems and fire line taps should be designated on the plans.

16. Final placement of fire hydrants will be approved by PW.

Response to and Approval of Conceptual or Preliminary Plans

PW will review and respond to the preliminary plans within 15 working days of receipt. The developer or his designated agent will be notified of the review results in writing, along with determination of the construction cost estimate, fees associated with acquiring service and any additional off-site improvements required. The developer will be responsible for obtaining approvals from the appropriate County Planning Department. Availability of water should be received from PW prior to submission to either county for development permits.

2.2.4 Water Availability Request Response & Construction Cost Estimate

Due to rapid growth in the Powdersville area, it may be necessary to perform hydraulic modeling to determine if the water distribution system has adequate water capacity to support a proposed development. This will typically occur on commercial projects that require large amounts of water capacity. This analysis must be done by PW engineers before any hard design is performed to ensure the project is viable**.** The developer will be informed during the first steps of the development process if hydraulic modeling is necessary. Unfortunately, there is considerable costs associated with the modeling that must be paid by the developer (See Appendix A). If hydraulic modeling is required, it is recommended that the developer consider all phasing of the ultimate project that is being proposed and all scenarios can be modeled all at once thereby making it more cost efficient.

Once any required modeling is performed, within 15 working days of receipt of a completed Water Availability Request Form (See Appendix B), conceptual plan and associated fees, PW will respond in writing, by email or personal conference to inform the developer of the availability and requirements for water service. It will also include our engineer's cost estimate that will include the estimated cost to construct the water infrastructure to support the project as presented. The estimate will include fees associated with a purchase of water capacity calculated from information provided on the Water Availability Request Form, the maintenance bond, engineering design & inspection, permitting and GIS mapping.

Prior to inception of design and permitting, the Developer must provide proper documentation that designates the type of wastewater disposal that will be utilized for the project. For on-site septic systems, Powdersville Water will require the submission of septic system pre-approval permits from SC DHEC for each lot proposed in the development. This step ensures that the water system infrastructure is properly designed and built. This effort will also ensure that the developer's funds are spent properly for water infrastructure that will remain in place permanently and not removed due to land that won't percolate properly.

2.2.5 Dormant Projects

A project with no developer/engineer activity for twelve (12) months after PW's response to the availability request will be considered a dormant project and will be removed from active status. Once the project is marked as dormant, any future return to active status will require that the project be resubmitted as a new project and new fees may apply.

2.2.6 Design & Permitting

Upon receiving septic tank pre-approval permits or valid proof of a regional sewer connection, the payment of engineer design fees and permit fees outlined in the construction cost estimate and execution of a Developer's Agreement (See Appendix C-2), PW will engage their engineer in the proper field work (coordinating with the developer or developer's agent) to complete design and permitting as quickly as possible. All design work will meet the requirements of PW's Water System Guidelines for Design & Construction approved by SCDHEC. PW will be responsible for applying to all County and State agencies for permits. This process could take 60-90 days depending on the turnaround time from other agencies.

2.2.7 Public Bid Opening

Once all construction permits and approvals are received, PW will coordinate the timing of the public bid opening with the developer. We prefer to open bids when all roads are rough graded, gravity sewers installed, storm water infrastructure installed and prior to road curbs being installed. If this is not coordinated properly, the developer can expect construction costs to increase. The construction costs can be controlled with good coordination of all utility construction. If we do not receive this spirit of cooperation from the developer, increased construction cost can be expected, largely due to conflicts with other infrastructure. PW maintains an approved list of pre-qualified pipe contractors that receive bid packages for all developer projects contracted by PW. To ensure competitive pricing, PW will solicit bids from qualified contractors that will be opened publicly at our office at a pre-determined time. The developer is welcome to attend this event. PW's engineer will certify the low bidder. PW maintains the right to reject any and all bids. Pipe construction bids are typically guaranteed for 60 days. Therefore, it is very important that the bid opening is timed properly with site preparation pre-performed by the developer. Once the low bid is certified, the developer must submit to PW the remaining fees outlined in the Construction Cost Estimate to include the certified construction amount, maintenance bond, capacity fees, GIS mapping fees, and any additional permitting and engineering fees.

2.2.8 Contract, Notice to Proceed & Pre-Construction Meeting

Once the balance of the fees is paid, PW will contract with the certified low bidder and provide a notice to proceed. PW's engineer will schedule a pre-construction meeting on site with the developer, any of the developers' subcontractors, PW's pipe contractor, a representative of PW and representatives of other utilities if necessary. The purpose of this meeting is for everyone to save time and money, get acquainted, reduce conflicts and to lay out a plan of action to promptly complete the water system improvements within regulatory and PW guidelines.

2.2.9 Construction Process

The work of PW's pipe contractor will be inspected by inspectors hired by PW to ensure top quality workmanship. A daily work log will be maintained by PW inspectors. The inspector will also maintain a record of bad weather days, material deliveries, field changes and other information in conjunction with the contractor. The contractor will perform all work and testing as required by municipal, County and State regulations. PW pre-qualified contractors are expected to maintain a good working relationship with all regulatory agencies and other parties involved with the construction project. This is not just a rule; this is an important step in remaining on PW's list of pre-qualified contractors list. Once the construction is complete, the project is inspected and closed out and a SCDHEC operating permit is received. PW will ensure that all items on the Project Construction Checklist (See Appendix F) are completed. Ownership of the project will not transfer to PW until this list is complete. Therefore, new water taps will not be activated on the new water lines until the project is properly closed out, record drawings are received and approved and all operating permits are secured. The responsibility for the items on this list is considered to be shared among the developer, PW and PW's engineer. PW will take ownership, operation & maintenance responsibilities for the new water improvements that are not on private property.

A maintenance bond shall be required on all developer projects. The amount of the bond shall be 5% of the total bid amount of the project, with no bond less than $2,500.00. **The maintenance bond will be cashed in the event that a repair, relocation or modification is needed on new infrastructure by PW during the warranty period for any new project. Every developer will be held responsible for activities by all builders, contractors, sub-contractors and related laborers and any damage they may cause involving the water infrastructure and/ or any fines involving water theft/meter tampering.**

The warranty period for private development work will typically be one year upon PW's acceptance of the infrastructure into the system. However, if necessary, the warranty period may be extended until the development is 85% built-out and all utility construction is complete.

During the warranty period, pipe repairs, relocations or modifications to approved piping that is caused by any developers, builders, contractors, sub-contractors and related laborers will be corrected by PW immediately upon detection and the expense will be deducted from the maintenance bond for the project. If costs for these types of repairs or modifications exceed the amount of the maintenance bond, the developer will be asked to make other arrangements for payment.

Except as noted in this paragraph, PW will perform a warranty inspection (to include any area in the SCDOT or County right-of-way impacted by the project) during the last quarter of the warranty period. Any deficiencies related to the contractor's work will be forwarded to them for repair at their costs. After the warranty inspection, the remaining balance of the bond, if any, will be released to the developer. However, if all dry utilities are not installed by the end of the warranty period, the maintenance bond may be extended until all dry utilities are completely installed and activated for 12 months. The same maintenance bond rules will also apply to any Alternate Delivery Projects (Section 2.3).

The warranty period discussed above begins with the issuance of the SCDHEC Approval to Place in Operation, completion of any punch list items and PW final inspection approval.

2.3- Alternate Project Delivery

Developers may prefer to use their own engineering consultants to design, permit, bid, oversee construction and close out water pipeline construction projects. All development applicants need to understand that PW is relatively small in staff and does not have a full engineering department in place to review new developments. Therefore, most of our projects are forwarded to a licensed engineer that we have prior arrangements with to perform these tasks at a pre-negotiated rate in a timely manner. **We understand that in certain circumstances, the developer may want to use another consultant and we will allow this if we are informed of this desire on the first day of contact prior to any cost estimates being requested.** Please realize that allowing other consultants to perform these functions that are not trained on our processes, will directly result in additional costs to PW. Therefore, there will be an alternate delivery charge to the developer that is outlined in Appendix A. The developer and their consultant must understand that in taking this responsibility, the following must occur in a timely fashion and in strict coordination with PW's Project Coordinator:

1. A completed Water Availability form submitted to PW.
2. A preliminary site plan showing the layout of the project with enough detail on road R/W and lot lines to allow PW to understand what is needed to serve the project. The preliminary design must include all items outlined in Section 2.2.3; these will no longer be optional.
3. A construction cost estimate based upon recent pricing that meets PW's approved format.
4. Submit a full set of pipeline plans that meet all requirements of PW System Guidelines for Design & Construction to PW's Project Coordinator for a staff review prior any submittals to SCDHEC or other permitting agencies.
5. Make all corrections necessary after staff review and resubmit for PW approval.
6. Secure all local, State and Federal permits necessary to install the proposed water infrastructure in PW's name and under the signature of PW's Project Engineer.
7. For onsite septic system disposal, secure all septic system pre-approval permits from SC DHEC and provide copies to PW for approval.
8. Once all permits are in place and coordinated with PW's Project Coordinator, a bid date and time will be scheduled and arrangements made to invite PW's pre-qualified contractors to bid the project and make plans available to these contractors at no cost to PW or the contractor.
9. Conduct the public bid opening at PW's office in compliance with PW's approved Procurement Policy, tabulate the bids, verify all required bonds, certify the winning bid and notify all bidders of the results.
10. Deliver a signed Developer's Agreement and appropriate construction and capacity fees to PW to initiate the construction process. This must happen within 30 days of the bid opening to avoid bid expirations.
11. Using current EJCDC contract documents, insert proper names, dates, times and dollar amounts and execute an agreement with PW and the contractor.
12. Issue Notice to Proceed to contractor.
13. Schedule and conduct an on-site Pre-Construction meeting with PW, the pipe contractor and any other necessary parties to discuss in detail the laying conditions on site and how the contractor intends to perform the work.

14. Provide periodic inspections of the contractor's work in tandem with PW's inspector. The developer will be expected to pay for PW's inspector's time using the current fee at the time (see Appendix A).
15. Certify all payment draws with PW's Project Coordinator and pay contractor invoices.
16. Ensure the water infrastructure is built to the satisfaction of PW.
17. Witness and certify all pressure and bacteriological testing by a properly licensed PE.
18. Provide project closeout oversight using PW's documents and approved processes. Once all punch-list items are corrected, provide an acceptance letter of the project by a properly licensed PE with the electronic submission of record drawings to PW's Project Coordinator.
19. Secure all permits to operate and coordinating with PW, place new infrastructure into operation.

Any consultant considering the Alternate Delivery Option, should request a copy of PW's Development Policy and Guidelines for Construction before beginning the process. A meeting with PW's Project Coordinator and Engineer would then be appropriate to prepare them for engineering oversight of the project that will meet the approval of PW. If this is not done. PW reserves the right to stop the development of water infrastructure at any time if the chosen engineer does not adhere to PW policy.

2.4 -Water Capacity Commitment

Water capacity is site-specific. Once purchased for a constructed establishment, the capacity will go with the land or the commercial/residential space and is not transferable.

2.4.1 Residential Development Capacity

Water capacity must be pre-purchased for each new residential development. If the development is phased, capacity can be purchased as each phase is constructed. However, PW must approve the phasing plan as part of the construction plan approval process. Capacity fees for residential developments are calculated on an REU (Residential Equivalent Unit) basis with each REU requiring 300 GPD of water for each home. Commercial developments are calculated by estimated maximum day water use multiplied by the current capacity rate per gallon. PW system-wide fees for water capacity used to calculate the fees due are listed on Appendix A.

2.4.2 Multi-Family Development Capacity

Water capacity must be purchased for each multi-family facility (i.e., apartments, condominiums, etc.). Water capacity is calculated by using SCDHEC Contributory Loadings (See Appendix G) and/or using historical consumption records for similar type facilities. Metering of water usage for multi-unit residential facilities will typically be accomplished using one meter for the entire multi-unit building. Sub-metering by the owner/developer is allowed if it meets all PW and regulatory requirements. If the developer desires to use sub-metering, these discussions should happen early in the development process. Sub-metering is the responsibility of the owner/developer and it will not be included in construction contracted by PW, nor on-going operation and maintenance responsibilities.

2.4.3 Commercial Development Capacity

Water capacity must be purchased for each metered commercial facility in a planned development. Water capacity is calculated by using the SCDHEC Contributory Loadings and consumption history of similar facilities if available. The minimum water capacity required for any commercial unit or space is 225 GPD at the time the project is developed. This will apply even if the tenant is not known at the time. **Additional capacity may be required at the time actual service is established for each space and the specific use of the facility is known.** This will be determined prior to installing the water meter for each commercial unit.

Developments that involve multi-commercial units or spaces where the specific use is not known may be assigned capacity based upon the total square footage of the commercial space or the minimum capacity assignment per unit or space, whichever is appropriate.

Water capacity requirements for commercial facilities may be estimated based upon historical data provided from similar projects. The data must be submitted to PW's project coordinator for approval. These estimates are typically based on DHEC Contributory Loadings and calculated using PW's current fee structure. The estimates will be based upon maximum daily flow data. Historical consumption data shall be submitted for a minimum of 1 year for similar establishments within similar market conditions to be considered.

2.4.4 Additional Water Capacity

If a multi-residential or a commercial facility is consuming water in volumes greater than the capacity purchased, PW may assess the account owner additional capacity fees based upon the average of the highest three (3) months of consumption that occurred during the past 12 months. If the usage exceeds the purchased capacity amount by a considerable amount, this could result in additional fees being assessed to the account holder for additional capacity. This situation may also occur when the use of the facility has changed in nature, expanded or up fitted from the original intent.

2.5 -Water Main Extensions - Minimum Standards

Any new development project (residential or commercial) that requires a significant main extension shall be required to install a large enough main to support a fire hydrant (minimum 6-inch). Sizing of all water mains shall meet SCDHEC regulations, as well as PW construction guidelines. The only exceptions will be main extensions less than 500 feet of existing lines smaller than 6-inch that have adequate capacity as approved by SCDHEC. Typical exceptions are serving a single-family home or resolving a public health concern where regulated drinking water may not be available. Where appropriate, water mains 6-inch and larger will be equipped with properly spaced fire hydrants to serve the proposed development. The cost of fire hydrants that serve a proposed project will be included in the construction cost estimate for the project. Any over-sizing of water mains or the installation of additional fire hydrants for other purposes will typically be funded by PW. This will be handled using a cost-sharing agreement between PW and the developer.

2.6 –Single Taps for Commercial Development

Fees will be charged in accordance with Appendix A that is current at the time. The procedure for an individual commercial tap is as follows:

1. A completed Water Availability Request Form (See Appendix B) and a conceptual site plan must be submitted to PW. The site plan must show the accurate locations of all buildings, planned water and/or sewer connections, along with all road layouts and surveyed project boundaries.

2. Water usage calculations for the commercial site should be submitted if available from the design engineer.

3. PW staff will review the project for certain requirements, such as water capacity needs, backflow prevention, meter sizing and location, irrigation, fire protection needs, tap construction, etc.

4. Once PW has reviewed and approved the submittal, a commercial quote outlining construction fees will be issued to the applicant. The fees must be paid to the Customer Service Department at least 15 working days prior to the desired date of connection to the system. PW will do its best to meet this deadline, but cannot guarantee this turn-around time. Permits from other agencies may be necessary prior to construction.

5. Activation of water connections to newly installed water mains systems will not be allowed prior to the issuance of a SCDHEC Approval to Place in Operation. This will not apply if the tap is made to a pre-existing water main that is already permitted. In the case of a commercial development with multiple subdivided units (strip center), each unit or tenant space will be required to have an individual metered water connection and a separate water capacity calculation. Apartments and multi-residential are not included in this scenario.

2.7 - Fire Line Connections

All fire line connection requests will be required to submit the Fire Line Application, Appendix I, and submit fees as outlined in Appendix A. Once application and fees are received, the proposed fire connection will be analyzed on PW's hydraulic model to determine the fire flow that is available at the site at a minimum allowable pressure.

CHAPTER 3: CONSTRUCTION PROCEDURES

3.1 - General Conditions and Methods

3.1.1 Pre-Construction Conference

The purpose of the onsite pre-construction conference is to review field conditions, confirm the construction schedule, acquaint all parties that are building the project, document deviations from the approved plans and specifications, stress the importance of PW approved Construction Guidelines, reduce utility conflicts, outline inspection procedures and project close out policies. Any changes to the scope of the project that result in additional costs which occur after the project has been bid and certified will be funded by the developer. If all of these items are discussed thoroughly, it should result in saving time and money for all parties.

3.1.2 Pipe Contractor Requirements

A list of all pipe subcontractors performing the water installation must be provided to and approved by PW prior to the pre-construction conference. The contractor shall not award work valued at more than fifty percent (50%) of the contract price to subcontractor(s), without prior written approval of PW. At this time, all contractors and subcontractors are required to provide upon request their current license number, classification and sub-classifications as listed with the SC State Licensing Board.

1. PW reserves the right to reject any contractor and/or subcontractor.

2. Any contractor or subcontractor hired by PW, who has not performed satisfactorily in the past, in the opinion of PW, may be restricted from working on any project that will be connected to the PW system and will be removed from the Pre-Qualified Contractors List. A notice of restrictions shall be issued in writing by PW.

3. Pursuant to the above statements, contractors and/or subcontractors may be rejected or restricted from working on PW projects for the following reasons:

    a. Failure to perform work in a timely manner and in accordance with project schedules.

    b. Constructing facilities not in compliance with approved plans and specifications.

    c. Producing sub-standard or poor-quality work.

    d. Failure to perform warranty work.

    e. Chronic failure to comply with PW's Development Policy and Procedures.

    f. Any other reason that PW may doubt the qualifications or general intent of the contractor.

4. The contractor/subcontractor will be restricted from performing work for PW for a minimum period of one (1) year from the date of notification. The contractor/subcontractor may submit a request for reinstatement to PW's Operations Manager after this one-year period. PW will decide at that time whether re-instatement is granted.

3.1.3 Conformance

Construction activities shall be performed in accordance with the approved plans and with PW's Water System Guidelines for Design & Construction. If a discrepancy exists between plans and guidelines, the engineer representing PW shall determine how to proceed.

3.1.4 Construction Methods

All work shall be in accordance with the latest edition of PW's Water System Guidelines for Design & Construction. Failure to comply with these specifications will be cause for rejection of all work. Where water lines are to be installed in a new roadway, the roadway and drainage ditches shall be rough graded in accordance with the County or State's regulations, prior to the installation of new water infrastructures. Contractors will not be allowed to install pipe when grading is not near finish grade.

3.1.5 Project Site Access

PW shall have unrestricted access at all times to the premises where pipe construction is occurring to make any inspections deemed necessary to ensure compliance with the provisions of this policy.

3.2 – Safety

3.2.1 Contractor Responsibilities

The Contractor is responsible for assuring that construction safety procedures, as required by Federal, State, and Local Regulations are observed. The Contractor is required to take all necessary steps to prevent injury to persons or property in the performance of his contract.

If a PW Inspector, as part of his routine duties, observes unsafe practices or construction methods, he will inform the Contractor's manager to employ corrective measures to assure a safe working environment.

The Contractor will remedy all damage, injury or loss to any property caused, directly or indirectly, in whole or in part by the Contractor, subcontractor, or anyone directly or indirectly employed by either of them, or anyone for whose acts any of them may be liable.

3.2.2 Accident Prevention

In the performance of the contract, the Contractor shall comply with the applicable provisions of the regulations issued by the Secretary of Labor pursuant to Section 107 of the Contract Work Hours and Safety Standards Act entitled, "Safety and Health Regulations for Construction" (C29 CFT 1518), renumbered as Part 1926. Occupational Safety and Health Standards (29 CFR Part 1910) issued by the SC Secretary of Labor.

The Contractor will utilize and maintain, as required by conditions and progress of the work, all necessary safeguards. He will notify owners of adjacent utilities and property, when execution of the work may affect them.

The Contractor will take all necessary precautions for the safety of the general public as well as his employees. All roadside work shall be properly marked with lights, cones and barrels in accordance with the recent revision of SCDOT regulations, regardless of who owns the right-of-way.

At all times during the construction of the project and its component parts, the Contractor shall provide, install, and maintain proper temporary supports, shoring, and bracing to prevent any damage, injury, or loss to all employees performing the work and other persons who may be affected. In the event of violation, all fines, fees, etc. are the responsibility of the contractor.

3.3 - Wet Taps

All wet taps on existing water lines must be performed by PW or an approved tapping contractor. The contractor will be responsible for safe excavation, a pressure test on any tapping sleeves and shoring of the trench at the location to be tapped. All wet tap machines shall be in excellent working order and the proper cutter shells and pilot drills shall be in good condition. If pipe coupons are lost in the system during the tap, the contractor will be held responsible for any expense associated with extracting the coupon from the system or damage caused to the system. Any damage to the existing system caused by the contractor shall be repaired immediately at their expense. All wet taps shall be performed with a PW inspector present and all pipe coupons will be provided to PW for pipe condition assessment.

3.4 – Water Service Interruptions

When a wet tap is not possible, or the relocation of a water line requires interruption of service, PW must review and approve the shut-down procedure prior to any water interruptions. Once approval has been received, the contractor must contact PW Operations Manager to schedule the interruption seven (7) days in advance of the work. PW will identify those customers affected by the shut down and will notify them by distributing door hangers or some other method 72 hours prior to the shut-down. The schedule agreed to by the contractor must be strictly followed. If weather conditions prohibit the work from being performed, the interruption must be rescheduled in accordance with the above procedures. All scheduling must be coordinated directly with PW and relayed immediately to PW customers. Isolation of any existing water mains must be performed by PW employees.

3.5 - Construction Water Use Policy

All construction involving the extension of water mains or requiring the use of construction water must comply with this section.

1. New Construction Activity: Flushing of newly installed pipelines can use large quantities of water unaccounted for unless the volume/quantity is metered or estimated by the contractor and PW's inspector. PW agrees to provide enough water to adequately fill and flush new lines once they have been installed for testing. PW anticipates three times the volume of the new pipe for filling and flushing. Excessive use of water over this amount will be billed to the contractor at the retail rate in effect at the time.

    a. On all projects that require extension of existing water mains, the contractor must contact PW's Operations Manager to arrange for flushing of the lines and a PW representative must be present to estimate the water use.

b. **At all times, the main valve at the connection point of the new infrastructure will remain closed unless opened by PW for scheduled filling of water mains**. Unauthorized use or tampering with the main valve is grounds for a stop work order, administrative fees, civil penalties, and/or criminal prosecution.

c. After service authorization has been issued and all final inspection items are completed, the main supply valve will remain open.

3.6 - Hydrant Usage

Hydrant operation will be controlled and closely monitored by PW to protect the integrity of the water distribution system. Contamination of the potable system can easily occur due to improper use of or connection to fire hydrants. **Directly following new installations, all hydrants must be bagged and taped, tied or otherwise covered to provide visual confirmation that the water system is not ready for operation nor firefighting purposes.** Also:

1. No one except PW personnel and the local fire department are authorized to use a fire hydrant within PW's service area. The only exclusion is outlined in PW's Fire Hydrant Use Policy (See Appendix H).

2. A request for fire flow test results shall be made through PW. No other person or entity is authorized to perform fire flow tests on PW's system.

3. A contractor requiring the use of a hydrant to obtain water to fill tanker trucks, street cleaners, hydro-seeders or for any other purpose, must comply with PW's Fire Hydrant Use Policy (See Appendix H).

3.7 - Unauthorized or Illegal Usage

Unauthorized water usage is in violation of PW policy and is subject to Water Theft fines. Unauthorized water usage is illegal and therefore subject to civil or criminal penalties in Magistrates Court. The decision whether to press legal charges will be made by the PW Executive Director. When an illegal connection is found, PW will confiscate the device used on any illegal connection. If the responsible person is at the scene, they will be advised of the policy, the illegal connection to the hydrant will be removed immediately and the Developer will be assessed a fine for the unauthorized use. The confiscated device will be returned once payment of the fine is received. **Be advised that PW will strictly enforce this policy.**

3.8 - General Inspection - Construction Phase Review

Routine and unscheduled inspection of ongoing projects will be made by PW personnel or their assigned agents during the construction phase to ensure conformance with the approved plans and specifications.

Projects approved for construction will authorize PW inspection personnel access to the construction site at all times for the purpose of inspecting constructed facilities or observing construction operations in progress. PW inspectors will take appropriate action (including stop work orders), as outlined herein, when improper material or unacceptable workmanship is detected on the project and will notify the contractor, engineer and/or developer.

PW inspectors shall make periodic checks during all phases of construction to ensure that the contractor is complying fully with project design and specifications as well as the policies and procedures herein established. Any deviation or revision to the approved engineering plans shall be furnished in writing to the project design engineer by contract change order. The contractor shall not initiate any deviations or revisions until the engineer and PW Operations Manager have approved the changes.

3.9 - Work Orders

3.9.1 Stop Work Orders

Failure to adhere to the approved plans and/or specifications established for the construction of a project or adherence to applicable requirements of PW may result in the issuance of a stop work order. PW will send copies of the stop work order to the developer, engineer, and contractor. A copy will be issued to the in-charge contractor representative that is on site.

Approval to restart construction shall be issued only by PW or its assigned agent. Any construction performed by a contractor while under a stop work order will be considered unacceptable by PW and subject to removal and reconstruction.

3.9.2 Change Orders

From time to time, it may be necessary to make field changes to the scope of a construction project causing a decrease or increase in pricing as outlined in the original contract. PW's goal is to avoid change orders if at all possible. If it is determined by PW's engineer that a change order is necessary, the contractor must submit a Change Order Request on the proper form prior to initiating any changes to construction in the field. Once the change order is recommended by PW's engineer and approved by an authorized representative of PW, the work may proceed as agreed with PW's engineer. Pay requests for change order work must be submitted properly on forms provided by PW. Proceeding with change order work without the proper approvals may constitute the issuance of a stop work order until the work is corrected.

3.10 – Preliminary Final Inspection

A preliminary final inspection will be conducted at the request of the project design engineer, who is responsible for coordinating the inspection schedule with PW. Typically, this inspection should be performed after all water improvements are installed and tested and final grading (including roads) are completed and all storm water appurtenances installed prior to scheduling the inspection. Correct record drawings shall be submitted to PW prior to the final inspection being scheduled.

3.11 – System Testing

All pressure testing and bacteriological testing by the contractor shall be performed as specified in the PW Water System Guidelines for Design & Construction and in accordance with SC DHEC regulations, and as directed by the project design engineer. All testing must be conducted in the presence of the PW engineer or inspector in a manner that will minimize interference with the work progress.

3.11.1 Water Pressure Test for Water Mains

Each pressure pipeline, service lateral or valved section thereof must be subjected to hydrostatic testing in accordance with industry standards. As a result, these pipelines shall be tested to not less than 200 PSI for a period of 2 hours at the highest point of piping. If the pipeline experiences a pressure drop of 5 PSI or greater in the specified time, then the test fails. Refer to PW Water System Guidelines for Design & Construction for more information on this procedure.

3.11.2 Disinfection Test

Before being placed in service, each potable water main, tank or other structure used for potable water storage and distribution shall be disinfected by the contractor as specified in the PW Water System Guidelines for Design & Construction and as directed by the project design engineer. Proper bacteriological testing shall be performed as outlined in the guidelines.

3.12 - Final Inspection

A final inspection may be requested only by PW's engineer once all punch list items noted during the preliminary final inspection have been corrected and record drawings are submitted to PW. The PW inspector shall prepare a written punch list of any defects noted during the final inspection and distribute copies of the punch list to the contractor and PW's Project Coordinator. Any corrections to be made will be reviewed and approved by the PW inspector prior to issuance of a final approval and service authorization.

APPENDIX A

PROJECT DEVELOPMENT FEES

1. Water Availability Request – Residential and Commercial $ 25.00

2. Water Capacity Fees
   - Residential: per 1 REU (300 GPD/REU x $4.36/GPD) = $1,308.00/REU
   - Commercial: Estimated Maximum Day x $4.36/Gal

3. Alternate Delivery Fee (One-time administrative fee) $500.00

4. PW Inspection Fee for Alternate Delivery (per 1 REU) $50.00
   (Applies to Alternate Delivery Option outlined in section 2.3 or in any case where PW must use their own inspector to ensure construction work is properly performed.)

5. Residential Development Hydraulic Modeling Fee $625.00

6. Commercial Fire Line Connection Hydraulic Modeling Fee $750.00

APPENDIX B

WATER AVAILABILITY REQUEST FORM

Please Complete All Sections. Incomplete Forms Will Not Be Processed

Date_____

Contact Information (required)

Owner/Developer _____Phone/Email_____

Address_____

Engineer_____ Phone/Email_____

Development Information (required)

Name of Project & Location _____

Tax Map Parcel Number_____ County _____

Type of Development (Please circle appropriate choice)

Residential Residential/Multi-Family Commercial Industrial Institutional

Business Description (be specific for all tenants):

_____

_____

- Will the development be phased? Yes__No___ (Provide phasing detail with conceptual plan)
- Number of lots/single family units_____ Number of multi-family units_____
- Will the property be gated? Yes___ No___ (An easement will be required for gated projects)
- Number of commercial tenant spaces_____Name(s) of tenants: _____
- List any pool or recreation facilities: _____
- Size & quantity of primary domestic meter(s) requesting to serve development:

  _____

  Must provide proposed average and maximum day demand in gallons per day. Also provide maximum instantaneous demand in gallons per minute. If this is not included, it will be calculated for you or the application will be returned.
- List number and size of irrigation taps needed: _____
- List sewer disposal method proposed: _____
- If septic tanks are to be used, are SCDHEC pre-approvals in hand? Yes____ No____ (If yes, provide a copy of approval)

- Is a fire line connection needed? Yes___ No___
  If yes, see procedure in PW Development Policy and Procedure Manual
- Is on-site storage & pumping proposed? Yes___ No___
  If yes to either above, a complete set of approved fire protection plans designed by a licensed engineer must be submitted before a fire line tap fee can be quoted.

Commercial Development (only)

- Maximum number of employees in a 24-hour period_____
- Commercial kitchen facility proposed Yes ____ No____
- Shower or locker room facilities proposed Yes____ No____
  Describe _____
- If church, number of sanctuary seats_____Kitchen facility: Yes_____No_____
- If medical facility, number of patients per day_____ Number of beds_____
- If eating establishment, number of seats_____ Take-out meals per day_____
- If car wash, number of wash bays_____
- If automatic car wash, number of cars washed per day_____
- If laundromat, number of washers_____
- If educational building, max number of students/faculty per day_____
- If process facility, maximum gallons of water use per day_____Explain process in detail and provide documentation for maximum gallons of water use per day_____
  _____
  _____
- Will the development have cooling requirements (chillers, air-washers, cooling towers, etc.?) Yes ____ No____ ***If yes, provide designed water requirements for each***.
- Will facility have wash-down area?
  (explain)_____

Please forward completed form to Tracy Wyatt, Project Coordinator, by mail Powdersville Water 1719 Circle Road, Powdersville, SC 29642 or email twyatt@powdersvillewater.org and include conceptual plans with road layout and phasing detail, water use projections, fire protection needs and tenant process documentation. Please be thorough or you will be asked for additional information and this only slows down the process.

APPENDIX C-1

WATER CAPACITY COMMITMENT FORM

Project Name: _____

Location: _____PW Project #_____

Tax Parcel # _____County_____

MULTI FAMILY/COMMERCIAL COMMITMENT

( ) We have committed water capacity to serve this project.

Water capacity fee: _____GPD x $4.36 per GPD =Due $_____

_____ _____

Date Reviewed PW Executive Director

_____ _____

Date Paid PW Project Coordinator

_____

RESIDENTIAL COMMITMENT

( ) We have committed water capacity to serve this project.

Single Family Dwelling

Water Capacity Fee: _____REU x $1,308.00 per REU Due $_____ (300 GPD x $4.36/GPD)
_____ GPD x _____ lots = _____GPD

Mobile Home Dwelling

Water Capacity Fee: _____REU x $981.00 per REU Due $_____ (225 GPD x $4.36/GPD)
_____GPD x _____ lots = _____GPD

_____ _____

Date Reviewed PW Executive Director

_____ _____

Date Paid PW Project Coordinator

APPENDIX C-2

Powdersville Water

1719 Circle Road
Powdersville, SC 29642
(864) 404-2107

State of South Carolina
County of Anderson Date:

Development Agreement

Powdersville Water (PW) agrees to install: _____

At the following location: _____

Developed and owned by: _____

The engineering design fee and permitting fees will be paid prior to PW initiating engineering design and application for permits.

Once the project has bid, the balance owed will consist of the certified low bid amount, the capacity fees, the maintenance bond and any additional engineer and/or GIS mapping fees. These fees must be paid prior to the pre-construction meeting with the successful bidder. All required items, communicated at the pre-construction meeting must be received prior to PW awarding a construction contract.

After a construction contract is awarded by PW, if the developer makes any changes or modifications to the project site that cause additional costs to be incurred, the developer will be responsible for these costs. These changes may include grade or drainage changes, relocation of property lines, additions of entrance gates, sidewalks, curbs and gutter, medians, installation of other utilities that cause conflicts, etc. All construction changes affecting the water system must be approved in advance by PW, and PW reserves the right to stop all work if these guidelines are not followed.

If rock is encountered during pipe construction, the developer will pay for any expense related to moving the rock to complete the project. The rock removal may be handled under a separate agreement. For projects where rock is known to exist prior to project bidding, a quantity and unit price will be estimated and included as part of the base bid.

Once construction is complete, a minimum water bill will become due on each service connection as they become active and a monthly billing account is established for each lot or building space. The developer/owner will be responsible for following the Development Policy in all respects. In addition, the Developer/Owner is responsible for the actions of all builders and subcontractors working in the development to include the cost to repair damage to newly installed water infrastructure, meter tampering and penalty fees for illegal withdrawals of water from the system. Be advised that water used for construction purposes within the same development (residential or commercial) from one parcel to another where service has not been activated, is considered an illegal withdrawal. PW reserves the right to deny service to the development if fees are not paid and/or illegal activity occurs. Each parcel must have its own metered account for construction purposes.

Maintenance bond funds may be used to cover any expense associated with damage, warranty issues and fines from illegal connections or withdrawal of water by any third-party builders or contractors performing work in the referenced development. See section 2.2.9 of the Development Policy and Procedure Manual.

By execution of this agreement and upon final acceptance of the construction, we unconditionally deed to PW any and all interest we may have in the water mains and appurtenances as shown on the approved record drawings for the project.

By: _____

Its: Owner/Developer

WITNESS:

_____

_____

****

This agreement is accepted and it is agreed that PW will incorporate the above-mentioned facilities into the distribution system, upon final acceptance of the construction, and will maintain, service, repair, etc. same in a like manner as are all other portions of the system.

Powdersville Water

_____

TITLE: Executive Director_____

Due prior to design and permitting:

Engineering Fee $

Permit Fees $

Amount Due $

Date Paid: _____

Due prior to pre-construction meeting:

Construction cost (certified bid) $

Capacity Fee $

Maintenance Bond $

Other $

Amount Due $

Date Paid: _____

APPENDIX D

RECORD DRAWING STANDARDS

PW will release a service authorization after approval by the PW engineer of the record drawings. Two (2) sets of paper drawings and one electronic file of all record drawings shall be delivered to PW. All electronic files will be reviewed for adherence to policies before service authorization will be given on projects. Incorporate Section 2.2.3 "Preliminary Plan Requirements" and Section 2.2.6, "Design & Permitting" in addition to the following on all record drawings.

GENERAL NOTES

1. Developer's name, address, and telephone number (all sheets).

2. Developer's Contractor name, address, and telephone number (all sheets).

3. Street names and lot numbers (all sheets).

4. The "Record Date" must be boldly marked on each plan sheet.

5. All plans submitted shall be in a computer-generated format (AutoCAD) on NAD 1983, State Plane SC, HARN.

6. Must have a minimum of 2 dedicated benchmarks on plans and site, maintained by the owner / developer until project is complete.

7. The submitted drawing file will include features and text classified by the standard layer and naming convention. Drawing features and associated text shall not be combined in one layer. Text included in drawing files will use standard fonts that can be read without third-party software.

8. Phased projects will be required to submit record drawings for subsequent phases, which include as-built information on all prior phases. Lot numbers throughout all phases to run consecutively and not repeated on later phases. Naming convention shall remain consistent throughout phases. All revisions must be submitted to Powdersville Water. All costs associated with revisions shall be the responsibility of the owner / developer.

9. Indicate all storm water piping profiles, sanitary sewer profiles, BMP's, sidewalks, existing and proposed contours and water pipeline utility crossings. All entities and object colors must be drawn by layer.

10. All dimensions shall be to the nearest one hundredth of a foot in the vertical plane and the nearest tenth of a foot in the horizontal plane, with angles to the nearest minute. Dimensions to be on suggested layer.

11. A metadata text file with the same name as the drawing file (<drawing_file_name.txt) is required with each CAD drawing submission. This text file will provide technical parameters and contact information for the survey.

WATER – GPS CERTIFICATION

1. Water mains and water services and appurtenances shall be referenced to permanent visible structures, including road centerlines, edges of pavement, buildings, catch basins, and power poles where applicable. Rights-of-way/property line boundaries may be used in the absence of the other references noted. Tie down locations of all valves, bends, and tees, to fire hydrants, buildings, markers, or other permanent structures. All points shall be recorded to sub foot accuracy. Show depth of cover on all valves and fittings if greater than 3'.

2. An inset is required of all valve clusters and other areas of congestion. Show distance from hydrant to main line. Show depth of cover if less than 3' or greater than 5' deep.

3. Provide on plans all valves, linear feet of water main, as well as the size and material of pipe.

4. A separate shape file will be provided for each structure (water line, valves, hydrants, meters, and taps).

5. Shape file attribute data shall include brands, sizes, and material type.

EASEMENTS & PLATS

1. Show all easements to be conveyed and surveyed boundaries of any property to be deeded to PW. All easements and deeds must be properly executed and recorded in the proper County before being conveyed to PW. All documents will be reviewed by PW's legal counsel for accuracy prior to acceptance.

2. Show where water facilities are located within private property through which an easement will be granted. A surveyor will establish metes and bounds of such easements to sub foot accuracy.

The following statements shall appear on all record drawings and shall be signed by a licensed surveyor and the engineer of record, and show their respective registration numbers

SURVEYOR'S CERTIFICATION:

I hereby state that to the best of my knowledge, information, and belief, the survey shown hereon was made in accordance with the requirements of the minimum standards manual for the practice of land surveying in South Carolina, and meets or exceeds the requirements for a Class A survey as specified therein; also, there are no visible encroachments or projections other than shown. I also state that the survey shown is based upon NAD 1983, State Plane SC, HARN coordinate system and elevations are based upon the NAD 83, State Plane SC, HARN Datum.

SURVEYOR'S NAME (PRINTED) _____

SURVEYOR'S SIGNATURE_____

SC RLS NUMBER_____

DATE_____

ENGINEERS CERTIFICATION:

These record drawings have been prepared based upon information provided by others and our periodic observations. (ENGINEERING FIRM NAME) has reviewed this information and to the best of our information, knowledge and belief these Record Drawings accurately reflect actual locations of all new infrastructure that was installed with our approval.

ENGINEER'S NAME (PRINTED) _____

ENGINEER'S SIGNATURE_____

SC PE NUMBER_____

DATE_____

SEAL:

APPENDIX E

SERVICE AUTHORIZATION REQUIREMENTS

PW will issue a service authorization letter upon completing a successful final inspection and acceptance of the water system improvements. The service authorization letter is required to obtain a meter and water service to any tenants located in the project. A copy of the service authorization will be provided to the developer, engineer, and contractor.

To receive the service authorization letter, the following items must be completed:

1. All punch list items as identified by the engineer and PW inspectors. (See Appendix F)

2. Final record drawings received, reviewed and approved by PW **(**See Appendix D**)**.

3. The engineer's certification, to include confirmation that the air test, pressure test, and bacteriological test have been satisfactorily performed, along with the status of dry utility installation and final site grading. Bacteriological tests should be performed within 30 days of the end of the project. Samples taken sooner will require a confirmation test at the end of the project to ensure that the test results are still valid.

4. A signed SC DOT approval form/letter indicating their acceptance of the project (if applicable).

5. Release by other agencies such as State, County or others as applicable for encroachment permits or other liabilities

6. Execution of all easements and deeds necessary for the conveyance of the water facilities to be maintained and owned by PW. Documents must be correct and properly recorded at the appropriate county deeds and records office.

7. Certification that the developer has had an abstract of title performed for all property that is to be dedicated to PW either by fee simple conveyance or granting of rights-of-way.

8. All paperwork shall be delivered to PW and signed properly.

APPENDIX F

PROJECT CONSTRUCTION CHECKLIST

Project Name_____Project Number_____

PROJECT COORDINATORS REVIEW

Review Item	Date	Signature/Initials
Water Availability Form & Fees Received from Developer		
Engineering & Permit Fees Received from Developer		
Design Sent to SC DHEC for Permit		
SC DHEC Construction Permit Issued		
County/State Permit(s) Issued		
Bids Received & Certified		
Developer Agreement & Fees Received		
Pre-Construction Meeting Scheduled and Held		
Construction Contract Executed		
Engineers Certification of Project Received		
Pressure and Bacteriological Test Results Received		
All Easements Executed (If applicable)		
SC DHEC Approval to Place into Operation Issued		
Final Inspection by PW and Engineer Complete		
New Infrastructure Accepted by PW		
Final Payment to Contractor Issued		
Warranty Period Begins		
GPS Shape Files Received from Engineer & Loaded into Map		
Meter GPS Coordinates Given to Customer Service		
Record Drawing Received Correct and Scanned		
Final Payment to Engineer Issued		

INSPECTORS REVIEW

Review Item	Date	Signature/Initials
Punch List Inspection Complete and Delivered to Contractor		
Punch List Items Complete		
New Hydrants Tested and Inventoried		
New Valves Exercised and Opened		
Backflow Devices and Fire Line Connections Inventoried		
Private Hydrants Inventoried		
Meter Tampering Signs and Locks Installed		
Drainage, Grading & Grassing Approved		

Inspector Final Sign-off: _____Date_____

Operation Manager Final Sign-off: _____Date_____

APPENDIX G

SCDHEC UNIT CONTRIBUTORY LOADINGS FOR WASTEWATER TREATMENT FACILITIES

TYPE OF ESTABLISHMENT	*HYDRAULIC LOADING (GPD)*
Airport Terminal	
Per Employee	8
Per Passenger	4
Apartments, Condominiums, Patio Homes	
Three (3) Bedrooms or suites (per unit)	300
Two (2) Bedrooms (per unit)	225
One (1) Bedroom (per unit)	150
Assembly Halls	
Per Seat	4
Barber Shop	
Per Employee	8
Per Chair	75
Bars, Taverns	
Per Employee	8
Per Seat (excluding restaurant)	30
Beauty Shop	
Per Employee	8
Per Chair	94
Boarding House, Dormitory	
Per Resident	38
Bowling Alley	
Per Employee	8
Per Lane, No Restaurant, Bar or Lounge	94
Camps	
Resort, Luxury (per person)	75
Summer (per person)	38
Day, with Central Bathhouse (per person)	26
Travel Trailer (per site)	131
Car Wash	
Per Car Washed	56
Churches	
Per Seat	2
Clinics, Doctor's Office	
Per Employee	11
Per Patient	4
Country Club, Fitness Center, Spa	
Per Member	38
Dentist Office	
Per Employee	11
Per Chair	6
Per Suction Unit (standard unit)	278
Per Suction Unit (recycling unit)	71
Per Suction Unit (air generated unit)	0
Factories, Industries	
Per Employee	19
Per Employee, with Showers	26
Per Employee, with Kitchen	30
Per Employee, with Showers and Kitchen	34
Fairgrounds	
Average Attendance, Per Person	4

Grocery Stores	
Per Person, no restaurant or food preparation	19
Hospitals	
Per Resident Staff	75
Per Bed	150
Hotels	
Per Bedroom, No Restaurant	75
Institutions	
Per Resident	75
Laundries	
Self Service, Per Machine	300
Marinas	
Per Slip	23
Mobile Homes	
Per Unit	225
Motels	
Per Unit, No Restaurant	75
Nursing Homes	
Per Bed	75
Per Bed, with Laundry	113
Offices, Small Stores, Business, Administration Buildings	
Per Person, No Restaurant	19
Picnic Parks	
Average Attendance, Per Person	8
Prison/Jail	
Per Employee	11
Per Inmate	94
Residences	
Per House, Unit	300
Rest Areas, Welcome Centers	
Per Person	5
Per Person, with Showers	10
Rest Homes	
Per Bed	75
Per Bed, with Laundry	113
Restaurants	
Fast Food Type, not 24 hours (Per Seat)	30
24 Hour Restaurant (Per Seat)	53
Drive-in (Per Car Served)	30
Vending Machine, Walk-up Deli (Per Person)	30
Schools, Day Care	
Per Person	8
Per Person, with Cafeteria	11
Per Person, with Cafeteria, Gym and Showers	15
Service Stations	
Per Employee	8
Per Car Served	8
Car Wash (Per Car Served)	56
Shopping Centers, Large Department Stores, Malls	
Per person, No Restaurant	19
Stadiums, Coliseums	
Per Seat, No Restaurant	4
Swimming Pools	
Per Person, with Sewer Facilities and Showers	8
Theaters: Indoor (Per Seat), Drive In (Per Stall)	4
Warehouse/Office Space: per 1000 sq. ft.	100

APPENDIX H

Bulk Water Agreement & Permit

IMPORTANT: YOU MUST READ THE FOLLOWING BEFORE COMPLETING THE APPLICATION

Fire Hydrant Use Policy

Powdersville Water (PW) is required by the S.C. Department of Health & Environmental Control (SCDHEC) to enforce the proper use of all fire hydrants throughout the water distribution system. Each hydrant is a potential entry point for contaminants into our drinking water if withdrawals from the system are not performed properly. Contamination to the system may easily occur if a backflow or back-siphonage condition occurs in the drinking water system. This may happen anytime that water is removed from the system in large volumes at high velocities. This is not only a public health risk, but a threat to system security, as well. Therefore, the general policy of PW is to restrict the use of fire hydrants only to PW maintenance employees and fire department personnel for fire-fighting purposes. Only under special conditions will PW allow others to use hydrants in the system (see long term construction use below in item #10). Contractors in need of bulk water in the PW service area are required to contact the PW office prior to withdrawing water from the system. Failure to adhere to this policy is a violation of State Law and is considered water theft. The first-time offense will result in a penalty of $500 with the second offense will be $1,000. The violation is punishable by fine and/or incarceration and PW will not refrain from enforcing this policy.

PW understands that contractors need large quantities of water from time to time for specific jobs (i.e., paving, street cleaning, hydro-seeding, etc.) Unfortunately, PW cannot provide this service at every location and ensure that our drinking water system remains safe. Providing high quality drinking water to our customers is of the utmost importance and takes precedence over providing bulk water to those in need. However, we have established two locations in our water system where those that need bulk water may obtain it and not endanger our system. The hydrants located at the following locations are designated "bulk water stations" and will be permanently equipped with a fire hydrant meter and backflow preventer for your use: (1) PW's Main Office at the intersection off SC 81 and Circle Road (located in the cul-de-sac behind our office); (2) Lake Road (Wren logo) Tanks at the intersection of SC 81 and Lake Road. You will need a fire hose equipped with a female NST (fire hose thread) coupling to use the metered connection.

Access to our hydrants, and the related fees and procedures, vary based on the circumstances:

1. **One Day Permit: If you need water for one day, you will need to complete the application below that will state which of the two bulk water stations you plan to use. This one-day permit will allow you to withdraw up to 10,000 gallons. If you plan to use more than this amount, a charge equaling the current volumetric rate per each additional 1,000 gallons over the 10,000-gallon allotment must be paid at the time of application. If usage exceeds the permitted gallons, it is your responsibility to return to the PW office and pay for the additional usage.**

2. **<u>14 Day Permit:</u> If you need water from a bulk water station for more than one day, you may complete the application below for 14 calendar days and pay the 14 Day Fee (non-refundable). This will allow you to withdraw up to 30,000 gallons. If you plan to use more than this amount, a charge equaling the current volumetric rate per each additional 1,000 gallons over the 10,000-gallon allotment must be paid at the time of application. If usage exceeds the permitted gallons, it is your responsibility to return to the PW office and pay for the additional usage.**

3. **<u>30 Day Permit</u>: If you need access to the bulk water station for more than 14 calendar days and you have been a hydrant water customer for more than six months in good standing, you may complete an application for 30 calendar days and pay the 30 Day Fee. This will allow you to withdraw up to 60,000 gallons. If you plan to use more than this amount, a charge equaling the current volumetric rate per each additional 1,000 gallons over the 60,000-gallon allotment must be paid at the time of application. If usage exceeds the permitted gallons, it is your responsibility to return to the PW office and pay for the additional usage.**

4. **<u>Long Term Construction Permit:</u> If you need water for a construction project for more than 3 months, you may rent a mobile hydrant meter that is backflow protected by completing the application below and paying the Long-Term Construction Fee. These devices are limited in number and will be made available on a first come, first serve basis. PW personnel will deliver the meter to the project site and will install the device at an agreed upon site and a beginning reading will be recorded at that time. The hydrant meter can only be used at the hydrant that is chosen. The applicant will be held responsible for the water used through the meter. The meter will be read by PW each month and the water used will be billed at the current volumetric rate per 1,000 gallons. After six months, there will be an additional monthly rental fee (see below), in addition to the volumetric charges. In freezing weather, PW will unlock the meter from the hydrant and allow the contractor to keep it protected when not in use. Notwithstanding the forgoing, it is your responsibility to protect the meter from damage, including the damage caused by freezing. When the project is completed, the applicant shall request for the meter and backflow device to be picked up by PW. Upon inspection, if there is any equipment damage, it will be deducted from the deposit. Any remaining balance of the deposit will be refunded to the applicant by mail.**

After you have received your permit:

***<u>Permit Must Be in Your Possession:</u>* Once you have paid the proper fees to PW Customer Service Department, you will be issued a "bulk water station" permit that you must keep in your possession when withdrawing water from any of our stations. Our field employees can request to see your permit at any time. If you do not have a permit in your possession upon request, your permit will immediately expire or if we determine that you have not applied for a permit, a water theft fine will be assessed and you may be subject to further prosecution through the County Sheriff's Department.**

***<u>Proper wrench required:</u>* If you do not have a proper hydrant wrench, we will issue you one on the first visit. This wrench should only be used at the sites previously mentioned. Do not use anything but hydrant wrenches on PW hydrants or you will lose the privilege of receiving bulk water and you will be charged for the hydrant repair.**

Opening a fire hydrant safely: **When operating a fire hydrant, always turn the wrench slowly when opening and closing the hydrant to prevent water-hammer in the system. If this rule is not followed, the results can be disastrous and you will be held liable for any damages incurred from water hammer. Also, the hydrant meter is equipped with a gate valve on the downstream side of the hydrant meter for throttling the flow from the hydrant. Do not throttle the hydrant flow at the hydrant operating nut. When using a fire hydrant, the operating nut must be opened completely. It is a good idea to shut the gate valve at the meter prior to operating the hydrant operating nut to prevent the hose from whipping. After each use of the hydrant, turn off hydrant using the operating nut. If you are unclear about any of the above, a PW field service technician will be glad to assist you.**

Meter Readings: **It is your responsibility to keep up with the meter readings at each filling and your conscience is your guide. Do not attempt to remove our hydrant meter or backflow preventer from any of the bulk water stations. This will be considered theft and treated accordingly.**

Damage & Loss: **PW retains the right to retain all hydrant use fees received and charge for damages to our equipment or facilities. The applicant will also be held responsible for loss of any equipment that is provided by PW as part of the Hydrant Use Policy. If the hydrant meter and/or backflow protection equipment cannot be returned to PW in good working order, the applicant will be charged for the replacement equipment. These funds must be received prior to PW establishing water service to the applicant at any other locations in our system.**

Insurance Required: **All hydrant users must have adequate liability insurance and provide PW with a certificate that lists PW as additionally insured. Note: If PW has a copy on file and the date has expired an updated certificate will be required.**

Your help needed: **As stated above, this policy is an effort by PW to provide an additional service to our customers. The program will only work if honesty and proper workmanship prevail on the part of the customer. In an effort to continue this service, we ask that you immediately report any illegal or improper fire hydrant use in our system by calling our Water Theft Hotline at 864-400-6342. Our water theft fine for contractors/developers is $500 for the first offense and $1,000 for each offense thereafter. If PW employees find equipment attached to any hydrant in our service area without prior permission from PW, all equipment will be confiscated and will not be returned to the responsible party until the water theft fine is paid to PW.**

My signature on the application below indicates that I have read and understand PW Fire Hydrant Use Policy in its entirety. I understand that I am performing this action at my own risk and PW is not responsible for my actions.

I will follow all procedures outlined in this policy and I understand that my failure to do so, will result in these privileges being revoked, possibly a fine and criminal charges.

Bulk Water Agreement & Permit

1719 Circle Road, Powdersville, SC 29642
Phone: 864-269-5440 Fax: 864-295-1496
www.powdersvillewater.org

Account Number: _____Company Name: _____

Construction Meter #: _____ Meter Reading (Beginning):_____ Meter Reading (Ending):_____

Billing Address: _____

Applicants Name: _____ Phone #: _____

Driver's License #:_____ Social Security #:_____

Location of Construction: _____ Hydrant # (If Available): _____

Purpose for Hydrant Water: _____

****

ONE DAY FEE (nonrefundable):	**$89.00**	**(10,000 gallons)**	**Vehicle Description used for water hauling:**
14 DAY FEE (nonrefundable):	**$208.00**	**(30,000 gallons)**	**Year: _____**
			Make: _____
30 DAY FEE (nonrefundable):	**$406.00**	**(60,000 gallons)**	**Model: _____**

Long term Construction Fee (over 90 days) $1,000: $500 deposit (refundable), $500 rental (nonrefundable) usage billed monthly; after 6 months there will be an $85 per month Rental fee in addition to the usage charge. (Circle one of the above)

****

Permit Expiration Date: _____

Amount Due: _____ Customer received hydrant wrench: Yes ___ No___

CONSTRUCTION METERS WILL BE INSPECTED FOR DAMAGE UPON RETURN. CUSTOMERS WILL BE CHARGED FOR ANY REPAIRS/REPLACEMENT EQUIPMENT THAT ARE NECESSARY. IN AN EFFORT TO CONTINUE THIS SERVICE, WE ASK THAT YOU IMMEDIATELY REPORT ANY ILLEGAL OR IMPROPER FIRE HYDRANT USE IN OUR WATER SYSTEM TO OUR WATER THEFT HOTLINE AT 864-400-6342. I HAVE READ PW'S FIRE HYDRANT USE POLICY AND FULLY UNDERSTAND AND ACCEPT THE CONDITIONS OF THIS POLICY. I WILL PROVIDE A CERTIFICATE OF LIABILITY INSURANCE COVERAGE AS REQUIRED BY THE FIRE HYDRANT USE POLICY.

Applicant's Signature: _____ Date: _____

****

Powdersville Water's Use Only

PW Authorization: _____

***THIS IS A PERMIT. KEEP THIS WITH YOU AT ALL TIMES WHEN USING A BULK WATER HYDRANT. ***

APPENDIX 1

FIRE LINE APPLICATION

Please Complete All Sections. Incomplete Forms Will Not Be Processed

Date_____

Contact Information (required)

Applicant Name _____Phone/Email_____
Address_____
Owner/Developer_____ Phone/Email_____
Address_____
Engineer_____Phone/Email_____

Service Location Information

Name & Location _____
Tax Map Parcel Number_____County Name _____
Business Description_____
Type of Facility Requiring Fire Line Connection_____
(Circle one) Residential/Multi-Family Commercial Industrial Institutional

Will the fire line require movement of water for testing purposes at any time? Yes___No____

If yes, a UL approved fire line meter will be required, as specified by Powdersville Water (PW) or an additional metered water tap. This device must be constructed to PW construction specifications at the owner's property line adjacent to the existing water main. An approved double check valve assembly must be installed immediately downstream of the fire line meter or in mechanical room location approved by PW.

If no, an approved double check valve assembly equipped with a detector meter must be installed to PW specifications at the property line adjacent to the existing water main or in an approved mechanical room location. If movement of water is ever detected on the fire line detector meter for any purpose other than fire, a UL approved meter meeting PW specifications must be installed immediately or service may be terminated.

By my signature below, I affirm that I have read and understand the conditions listed in this application for a fire line connection.

_____ _____
Applicant/Authorized Representative Signature Date

********Provide accurate drawings of the proposed fire protection system that the fire line will serve, stamped by the fire protection system engineer of record. ********