Oro Valley Water Utility
New Development Water Plan
Process Guide

The goal of this process guide is to facilitate the design and construction process of new water infrastructure for your development project and then delivering potable water through it to service Oro Valley Water Utility (OVWU) customers. In this guide, we will explain the engineering design review process of your water plan, how the OVWU coordinates with you during construction, and what steps are necessary to begin delivering potable water.

In Section 1, we will list major milestones of these processes in chronological order as an outline.

In Section 2 we will discuss what is required to successfully complete each step and move on to the next, so that your development can be served potable water by the OVWU. Several milestones may be included in each step.

The OVWU process is embedded in the overall development process of the Town of Oro Valley (Town), so we will describe our process as it correlates with the Town's process. A water plan is considered one of the Civil Improvement Plans for a development in the Town's process. If your project does not have to go through the Town's process, contact the OVWU and we will explain the requirements for your development.

Any extension to the public water system requires a separate water improvement plan. Below is a partial list of project types that require separate water improvement plans that will have to be sealed by a professional engineer registered in the State of Arizona and submitted to the Pima County Department of Environmental Quality (PCDEQ) after approval by the OVWU. See Arizona Administrative Code R18-5-505 thru R18-5-507 for additional information related to public improvements.

- Subdivisions
- Commercial Developments
- Single lot developments which require extensions of existing mains for hydrants

Below is a partial list of project types that require a simpler 1 or 2 sheet water plan submitted to the OVWU for review but are not reviewed by PCDEQ. Specific requirements on plan format and detail will be discussed on a case-by-case basis.

- Potable services without main extensions
- Fire line extensions as determined through plan review

The OVWU New Development section is responsible for reviewing and approving your water plan. The New Development section is part of our Engineering Division and is available to answer any questions you may have about this guide and the process. Currently Ilan Ibarra and Jeremiah Jenkins are your points of contact. They can be reached by telephone at 520-229-5000 or by email at ovwaterplanreview@orovalleyaz.gov.

Section: 1 Oro Valley Water Utility Process Outline

1.1 Introduction:

The information contained within this document will guide you toward:

1. Approval of your water improvement plan by the OVWU.
2. Receiving water service from the OVWU.

Every effort will be made by OVWU staff to ensure that the process of approval of a water plan is timely and efficient. Our staff is available to answer any questions you may have throughout the process. Please be aware that before most projects are allowed to move to construction PCDEQ must also approve the water plan after the OVWU has.

1.2 Process Milestones:

Preconstruction (Design) Process

- Approval of Final Site Plan
- Submit Water Master Plan
- Master Plan Approval
- Submit Water Design Plan (Separate Water Plan)
- Approval by OVWU and Golder Ranch Fire
- Submit to PCDEQ
- Approval by PCDEQ
- Issuance of "Approval to Construct" (ATC) Certificate by PCDEQ

Construction Process

- Grading pre-construction meeting with the Town's Community and Economic Development Department (CED)
- Issuance of Grading permit by CED
- Developer returns completed Line Extension Agreement (LEA) to the OVWU
- Separate water pre-construction meeting held with the OVWU
- Inspection fees for water plan installation inspection are paid to the OVWU
- Construction on water infrastructure starts
- Testing of newly installed infrastructure
- Satisfactory Bacteriological test results
- Tie-ins completed
- Submittal sent to PCDEQ by OVWU for the issuance of the "Approval of Construction" (AOC) along with Engineers Certificate of Completion (ECC).
- AOC is issued
- Meters can be purchased and installed by OVWU

Section: 2 Process Steps in Detail

2.1 Preconstruction

2.1.1 Approval of your Final Site Plan

You will be required by the Town to submit for review and approval a Conceptual Site Plan and a Final Site Plan for your development. The OVWU reviews both plans and our primary concerns during review are that water infrastructure extensions and corridors for same are represented accurately and that the need for offsite water mains, if necessary, are identified. Pipe sizing and exact alignments are not reviewed critically during these submittals. A water improvement plan can be submitted with all the other Civil Improvement Plans when the Town is ready to accept them.

2.1.2 Submit Water Master Plan

When the Town is ready to accept Civil Improvement Plans, the water infrastructure Master Plan and all associated checklists for your development can be submitted. All required plans will be submitted via SmartGov. The Master Plan does not need to have exact locations of mains within roadway prisms, right of ways or easements and it does not need to show all the appurtenances of a fully designed water plan. The purpose of the Master Plan submittal is to hydraulically model the proposed infrastructure to verify it meets current standards and regulations for flow, pressure and velocity.

Water main and service sizes are necessary to be shown on the water master plan as is the required fire flow determined by Golder Ranch Fire District (GRFD) and commercial and/or domestic demands, per NFPA. **On a case-by-case basis**, Developers and Engineers may be able to combine the Master Plan and the Design Plan for a single submittal. This will need to be pre-approved and will be dependent on the complexity and size of the project. If this is the form of submittal the Design Plan cannot be approved until the Development Plan (commercial projects) or Final Plat (residential and sometimes commercial projects) for your development is approved by the Town.

The contacts used in your SmartGov profile will be contacted with a SmartGov email that the review is completed.

Review fees will be collected at the time of application, and subject to additional charges depending on the complexity of the model. Master plan submittals will be subject to the Hydraulic Review Fees. The fee schedule for plan reviews can be found here: rate-schedule-effective-2025.paa.mr.pdf.

2.1.3 Water Master Plan Approved/Submit Water Design Plan

Once the Water Master Plan is approved you can then submit the Water Design Plan through the SmartGov Portal. You will be required to submit the Design Plan, along with the applicable permit numbers from CED for your Plat or Development plan, and the Civil Improvement Plans associated with your project. The Design Plan must show all fittings and appurtenances with main sizes shown as approved from the Master Plan. The OVWU will review the plans for technical compliance with all codes, standards and statutes.

The contacts used in your SmartGov profile will be contacted with a SmartGov email that the initial review is completed. The plans will be marked with redlines to show corrections that are required. Review fees will be paid at time of application through the SmartGov System.

When the Design Plan is approved the contacts used in your SmartGov profile will be contacted with a SmartGov email that the last review is completed and approved with conditions. The condition will be that the plans will need to be circulated to the GRFD for their digital signature. The Engineer must then resubmit the GFRD signed Water Plans into SmartGov for OVWU's digital signature of approval. Once OVWU has signed the approved water plan a "Statement of Water Adequacy" letter will be created for the approved water plan and sent to the Engineer at this time as well. The Adequacy letter lets PCDEQ know that the OVWU has modeled the proposed system improvements, and it meets statutory requirements. Any additional fees remaining will need to be paid through SmartGov before a signed plan is released. Additionally, we will require the CAD base files in AZ State Plane Coordinates to be sent to OVWU at this time.

2.1.4 Submit the Water Plan to Pima County Department of Environmental Quality (PCDEQ)

It is the responsibility of the Engineer of Record to submit the approved Water Plan to PCDEQ for the Certificate of the Approval to Construct (ATC) for the development. No work can begin on the water infrastructure until the ATC is issued.

When PCDEQ approves the water plan the OVWU requires three sets of paper (bond weight) copies that are stamped as approved by PCDEQ for our use. PCDEQ may require more plans for other uses. It is the responsibility of the Engineer of Record or the developer to get these three sets to the OVWU along with a digital copy of the ATC, and final plans in 300 dpi.

Smaller main extensions that do not serve a platted area and have no possibility of future connection can be submitted to PCDEQ for an Exemption Letter after approval of the plan by the OVWU. In this case the Engineer of Record submits the plan to PCDEQ as above, along with a letter stating the desire for an Exemption Letter as well as the construction costs for the planned infrastructure. The approval from PCDEQ will need to be forwarded to OVWU. The upper limit of the Exemption Letter construction costs is currently $50,000.00 (See AAC R18-5-505 for all criteria). Verify all the conditions necessary for the Exemption with PCDEQ. The OVWU will still inspect and supervise the construction of the water main extensions under the Exemption and will ensure all statutory requirements are met. The benefit of the Exemption process is that domestic

meters can be installed sooner than a project that has gone through the Approval of Construction (AOC) (Detailed in section 2.2.5) process.

2.2 Construction Begins

2.2.1 Grading Preconstruction Meeting/Grading Permit Issued

The work on your water main infrastructure is permitted under the Town's grading permit for your project and/or under a Right of Way permit for offsite improvements to serve your development. The Town (CED) will contact the OVWU when you have requested a grading permit pre-construction (pre-con) meeting (the meeting at which your grading permit is issued). This meeting is held on Microsoft Teams. In some cases, the OVWU will allow this grading pre-con to take place even if the water plans are not fully approved by the OVWU and PCDEQ. This is usually done when there is significant site work that needs to be constructed prior to water main work and the timing allows for the issuance of the ATC while this other work is completed. Please note that a request such as this can cause delays beyond the control of the Town or the OVWU. On smaller projects it is usually most efficient to wait until the ATC or Exemption Letter is issued before scheduling a grading pre-con. This decision is made through consultation between the CED and the OVWU Departments.

2.2.2 Water Preconstruction Meeting

Prior to the work on the water infrastructure being allowed to commence the developer must provide the OVWU the following items and must request an OVWU specific pre-con be scheduled.
Items need prior to construction beginning:

- ATC with PCDEQ
- Inspection fees paid (fee schedule found on our website under rates and fees.)
- Line Extension Agreement (LEA) returned to the OVWU (**see Section 2.2.3**)
- All material submittals are required along with a sieve analysis of bedding/shading material and survey cut sheets.

The OVWU needs a minimum of 48-hour notice prior to a requested pre-con meeting date so that the Inspector and OVWU can schedule the meeting with the contractor and crew that will perform the water main installation work. The contractor must have one of the following licenses to work on OVWU infrastructure.

- "A"
- "A-12"
- "A-16"
- "KA"
- "CR-80"

2.2.3 Line Extension Agreement

A Line Extension Agreement (LEA) is a legally binding agreement between you as the Developer and the OVWU. In the LEA you agree to design and build the water infrastructure extension shown on your water plan and that ownership of said water infrastructure becomes that of the OVWU once certain conditions are met. The LEA also explains the two-year warranty period for the installation of the water mains. Once PCDEQ issues either the ATC or the Exemption letter, the OVWU will prepare the LEA for your partial completion. It will be sent to you along with an instruction sheet which explains how you fill in your portion after your grading pre-con is held with CED. Once your portion is completed you return the LEA to the OVWU, and it will be reviewed by the Town's Legal Department as to form and accuracy. If the LEA is filled in satisfactorily the Legal Department and the Water Utility Director sign it. It will not be fully executed until the two-year warranty begins. In section 2.2.5., we will explain how this milestone is reached.

2.2.4 Construction/Testing

The OVWU will inspect the installation of the water mains for your Development, ensuring it matches the water plan for your project. The OVWU Inspector may require changes to the water plan to accommodate field conditions or deficiencies found on the water plans. You may want your Engineer to observe the installation as well and the OVWU has no objections to this, but the Engineer cannot direct the contractor to make changes without consultation with the OVWU, and if changes are requested, they must be sent to the New Development office for review and approval. The OVWU has final say on any changes to a water plan.

After the installation of the water mains is completed, testing of the mains begins. It must pass a 2-hour 200 psi pressure test, be chlorinated for 24 hours (with specific ranges of chlorinated water), the lines will then need to be flushed and bacteriological (bacti) samples are taken and submitted to a lab. These bacti results take 24 hours to complete and must come back 100% negative for bacteria/microbes. ***Please note: water samples are not taken on Fridays***. After passing the bacti test the mains must be tied into the existing OVWU system within a 14-calendar day timeframe. If this time frame lapses, the above process must be repeated. Any tie ins are scheduled through the Inspector.

At this point the water mains are only approved for use for fire protection. The OVWU will contact GRFD and tell them the hydrants on your site are available to be flow tested. A satisfactory flow test by GRFD generally allows combustibles to be placed on your site and this is scheduled by you through GRFD.

2.2.5. Approval of Construction/Potable Water Can Be Delivered/Two-Year Warranty

Potable domestic water can only be delivered to customers after PCDEQ issues a Certificate of "Approval of Construction" (AOC) and no meters shall be installed until this is issued.

The packet necessary for PCDEQ to issue the AOC is prepared by the OVWU. It includes As-Builts and test results. The OVWU submitting this packet assures that the timing for the issuance of the AOC is as efficient and timely as possible. Once the packet is submitted to PCDEQ the timing of the issuance of the AOC is under PCDEQ's control. When the AOC is issued water meters can be sold and installed and potable domestic water can be delivered to your development. ***Please note that meter boxes for meter installations must be set to OVWU standards, or the meter will not be installed. *** Links to these standards are available on our website. *

The work on the water main installations is only complete after all final valve boxes, meter boxes, and appurtenances are adjusted to final grades or pavement. The contractor needs to contact the OVWU when this work has been completed to schedule a final inspection of the work. The inspector will generate a punch list of deficiencies if there are any and this must be completed for the work to be deemed completed before a field final will be issued.

Each private development project has a two-year warranty period. The start date for this two-year warranty is set within the LEA for the development. The date will be added to the LEA when all punch list items are completed satisfactorily to OVWU Standards, and the project is in a "Final State", and a Field Final form is submitted by the Inspector. During the two-year warranty period if deficiencies are noticed or arise it will be the responsibility of the developer to correct, and the OVWU is to be notified to inspect all corrections.

2.3 Mylar Creation from As-built Plan Set

Once the project is completed the OVWU will create the final as-builts for the project. A digital copy will be sent to the engineering firm for mylar creation of the as-built plans. Water meters will be not be released (other than a model home) if the mylars are not received.

2.4 Project Bonding

It is the responsibility of the developer to bond the project for the water infrastructure installation. This usually originates through CED when you are at the grading pre-con phase of review before actual construction begins. OVWU will compare the bond amount with your engineers' estimate for the water works portion. The bond should include a 20% contingency over the cost of the infrastructure installation.

During construction the bond will remain at 100% full value until the project receives a Field Final for the water infrastructure installation. Normally the roads are paved, and all improvements have been made.

At this point the LEA will become active and a bond reduction of 75% can be requested. The remaining 25% bond amount will be held for the full two-year warranty period. **It is up to the developer of the project to request a reduction.**

Once the two-year warranty period has expired, the bond can be released, granted all, if any warranty work has been completed. **It is up to the developer of the project to request the release of the bond.**