

ATTACHMENT 1

PRIOR SUBMITTALS



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January 14, 2015

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**Re: Root Creek Water District, Riverstone Wastewater Treatment Facility
Waste Discharge Requirements
Agenda Item 33 of the December 5/6 Agenda of the Central Valley Water
Board**

Dear Ms. Creedon and Ms. Carpenter:

This letter is intended to supplement the information provided to the Board on December 3, 2014, and is provided on behalf of Richard Gunner, who is a landowner that owns lands adjacent to the Root Creek Water District and in the environs of the proposed Riverstone Wastewater Treatment Facility (the "Project").

We first wish to thank the Board for delaying action on the approval of the Waste Discharge Requirements Order for that Project on the December 6, 2014. We have used this time to more thoroughly evaluate the report of Waste Discharge and its various Appendices, and wish to share our conclusions of those matters below. We also want to take this opportunity to detail the legal standards and substantial evidence that require your Board to prepare a Supplemental or Subsequent EIR as part of its CEQA evaluations before approving the requested project approvals.

1. Root Creek's Determinations as Responsible Agency. In our prior letter, we submitted substantial evidence demonstrating a number of items that reflect that the proposed Project is a significant change from the Project evaluated in the certified EIR. In response to that letter, Root Creek Water District provided correspondence from its legal counsel and engineer. Neither of those letters disputed the changes that we previously detailed. Instead, they stated that they had conducted an evaluation of those changes, as a Responsible Agency, and determined that they were not substantial and would not have a substantial impact on the environment.

Root Creek did not previously provide your Board or the public any materials concerning the date and nature of their stated evaluations and findings. We recently obtained materials from Root Creek based on a Public Records Act request, and those materials did not disclose any such evaluations.

However, even if Root Creek did such an evaluation, your Board, as a Responsible Agency, is nevertheless required to conduct its own evaluation of these matters. The

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CEQA Guidelines, at Section 15096, specifically provide that "A Responsible Agency complies with CEQA by considering the EIR or Negative Declaration prepared by the Lead Agency and reaching its own conclusions on whether and how to approve the project involved". Your Board must therefore conduct its own assessment of whether the circumstances require a Subsequent EIR or a Supplemental EIR. You are not authorized to delegate that determination to, or rely solely on the unsubstantiated determinations of, another Responsible Agency.

2. Procedures for Your Board's Evaluations. CEQA does not mandate a specific procedure or format for your Board, as Responsible Agency, to determine whether a Subsequent or Supplemental EIR is required. However, the procedure must reflect a fact-based determination of the issues (see *Kostka & Zishke, Practice Under the California Environmental Quality Act (CEQA 2008) Section 19.1, p. 19-4.*)

The prior form of the proposed Tentative Order states, in a conclusory manner, that the requirements of a Subsequent or Supplemental EIR do not exist. However, there is no reference to any evaluation of the quality of the proposed Project changes, any assessment of their potential environmental impacts, or even an acknowledgement that there has been a significant change to the Project. This may be because those matters were not previously fully disclosed by Root Creek in the materials it submitted to your staff. Now that those materials have been provided, a more thorough evaluation of the appropriate additional evaluations required for CEQA compliance is necessary.

3. Inapplicability of Addendum Process. Based on the approaches that Root Creek and Riverstone Development have thus far pursued, it is reasonable to expect that they will attempt to convince your Board to pursue a further CEQA compliance method that avoids the benefit of further public review of the necessary evaluations. For that reason, I anticipate Root Creek will recommend to the staff and the Board that a mere Addendum to the previously certified EIR be prepared.

From a pure public policy standpoint, an Addendum has the significant disadvantage that it is not circulated for public review and comment. That is because it is designed for use in circumstances where there are merely minor corrections necessary in the prior EIR, or the document is developed to demonstrate the agency's determination that a subsequent or supplemental EIR is not required. (CEQA Guidelines Section 15164). Stated another way, an Addendum is acceptable, rather than a new or Supplemental EIR, when there are only minor technical changes or additions which do not raise new issues about the significant effects on the environment. (*Ventura Foothill Neighbors v. County of Ventura* (2014), 232 Cal.App.4th 429). Substantial evidence must support that determination. For the reasons detailed below, that determination is not appropriate in this matter because the circumstances requiring a subsequent or supplemental EIR exist. Therefore, both

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public policy and legal standards mandate an approach that does not rely on a mere Addendum.

4. Necessity of a Subsequent or Supplemental EIR. When substantial changes are proposed in a project, a Subsequent or Supplemental EIR is required (Public Resources Code Section 21166(a)). CEQA Guidelines Section 15162(a)(1) further detail that further EIR preparation is required where: (1) the change in the project is substantial; (2) the change involves new or more severe significant environmental impacts; (3) the change will require major revisions to the previous EIR based on the new or more severe impacts; and, (4) the more severe impacts were not considered in the prior EIR. In this instance, the decision to develop the Interim WWTP so that it percolates undisinfected effluent into the aquifer is a significant change in the Project that will have two important and severe impacts not considered in the prior EIR. Therefore, that EIR must be modified in a manner that provides more than a mere clarification or correction. It requires a substantial new analysis that is a major revision of the prior EIR.

a. Impact of Revision on EIR's Water Supply Assessment. The EIR certified by the County of Madera for the Project relied, in part on a Water Supply Assessment (a "WSA") for the Project that was prepared initially for the Root Creek Water District. A copy of that WSA is enclosed as Exhibit "A". Section 9 of the WSA details the proposed water supply for the Project. At section 9.3, it represents to the public that reclaimed water from the WWTP will be stored in lined ponds and used to irrigate crops on the designated disposal areas. That arrangement is to provide groundwater recharge, by diminishing the demands on groundwater that the agricultural uses otherwise created. It is therefore part of the overall program of assuring water supply reliability for the Project, and addressing the then existing groundwater overdraft within the Root Creek Water District.

Section 8.3 of that WSA also discusses water conservation measures and quotes from the Gateway Village 2006 Infrastructure Master Plan. It states that "all wastewater effluent shall be conjunctively reused within RCWD either as reclaimed water or for agricultural irrigation".

The approvals pending before the Regional Board reflect a significant change in the Project. Effluent generated during use of the Interim WWTP will not be stored in lined ponds or conjunctively reused in any manner. The entire amount will be percolated into the ground. In addition, the Ultimate WWTP no longer intends to use conjunctive reuse of effluent as the sole method of discharge. A substantial portion of the effluent will now be percolated into the ground. These are significant changes in the Project and have important impacts on the water balance arrangements represented by the WSA.



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The significance of this impact is illustrated by Table 1 of the WSA. That table demonstrates how Root Creek intends to achieve the requirements of the WSA, to address an overall 3,400 acre-feet of overdraft. The table details the contributions of six stated approaches. It confirms that the goal is not achieved without substantial reliance on the conjunctive reuse of the effluent (as detailed in its measures 3 and 4). The amount of effluent estimated for conjunctive reuse by the WSA also did not account for loss of water to the aquifer arising from percolation of the effluent. However, based on engineering analysis conducted by the engineer that prepared the Report of Waste Discharge, percolation of effluent will result in significant loss of such waters from the underlying aquifer.

The Report of Waste Discharge and its related addendums has information that, when parsed through, allows a reviewer to discern the significance that this Project change will contribute to the over drafted water aquifer (though there is no discussion of the impact of that significant change). That analysis requires an inventory all of the effluent to be generated during the years that the Initial Plant is operated, and how much is expected to be percolated. It also requires a consideration of the potential loss to the aquifer of portions of the effluent (beyond losses generated by evaporation. A similar analysis must be done for both phases of the Ultimate Plant since significant amounts of effluent will continue to be percolated.

The Initial Plant will provide no conjunctive use of effluent, and that circumstance will continue for up to 10 years. The Report of Waste Discharge, Section 3 (page 10) confirms that the Initial Plant is intended to operate for up to 8.6 years. The Antidegradation Study, Section 6.4.1 (page 24) states that the Initial Plant will operate for approximately 7 to 10 years.

The quantity of effluent, in acre-feet per year, is detailed in Exhibit E to the Report of Waste Discharge. The first page of that Exhibit confirms that 336 acre-feet of effluent will be generated and sent to the percolation ponds. The calculations assume that, after evaporation, 81% of the ponded effluent is percolated (see also Section 5.1 of the Report of Waste Discharge). As a result, 272 acre-feet per annum of effluent, which the WSA assumed would be applied to conjunctive use, is being percolated. That is 2,720 acre-feet over the 10-year life of the Interim Plant.

Thereafter, during the initial operation of the Ultimate Plant, as shown on page 2 of Exhibit E, 403 acre feet per annum of effluent is delivered to the ponds for percolation. After accounting for the reports assumed evaporation, the calculations demonstrate that 326 acre-feet per annum of effluent, which the WSA assumed, would be applied to conjunctive use, is being percolated. That is 3,264 additional acre-feet over the remaining 10 years of the WSA's analyzed 20-year framework.

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When the Ultimate Plant expands from 0.9 MGD to 1.8 MGD, as shown on page 3 of Exhibit E, 829 acre-feet per annum of effluent is delivered to the ponds for percolation. After accounting for the reports assumed evaporation, the calculations demonstrate that 671 acre-feet per annum of effluent, which the WSA assumed would be applied to conjunctive use, is being percolated.

Enclosed as Exhibit "B" (and enclosed with our prior correspondence) is a memorandum of Provost and Pritchard, which analyzed, among other arrangements, the benefit to the local aquifer of percolated effluent intended for another project in the immediate environs of the Root Creek Water District. It states that it is not reasonable to assume that percolated effluent in these environs is a 100% contribution to the underlying aquifer (even after deducting for evaporation). Instead, Provost and Pritchard recommend a 50% reduction in the benefit to the aquifer from percolated effluent (see note (1) to Provost and Pritchard Water Demand and Balance Calculations for Gunner Ranch West Development). There is no evidence in this record to conclude that percolation efficiencies for the Root Creek Project is any different than those assumed for the project evaluated in their Exhibit B analysis.

Applying Provost and Pritchard's above described percolation efficiency assumptions to its above-described water balance calculations, the new design of the Interim Plant will result in a loss to the aquifer of 136 acre-feet of water, per annum. For the initial capacity of the Ultimate Plant, the Project change will result in a loss to the aquifer of 163 acre-feet per annum. At full projected build-out of the Ultimate Plant, the Project change will result in a loss to the aquifer of 336 acre-feet per annum. These calculations are all supported by the analysis of the above-described materials, conducted by the engineering firm of AECOM, which is included for your reference as Exhibit "C".

b. Offsetting Surface Supply. During the prior Board hearing, Provost and Pritchard suggested that no further CEQA evaluations of any kind should be required despite the above described significant change to the Project. That argument relied on the fact that there are contracts for surface water supplies that Root Creek has entered into, which are described in the WSA.

That assertion somewhat reflected in Section 7.3 of the Antidegradation study, which states that the County's adopted Specific Plan for the Project requires that the Project import 3,400 acre- feet of surface water supply. A review of the relevant documents shows that the assertions are not accurate.

The element of the Specific Plan that references water balance commitments is the Infrastructure Master Plan (the "IMP"). The IMP is enclosed for your reference as Exhibit "D". At page 17, the IMP states that a groundwater recharge program is being instituted to replace the 3,400 acre-feet of overdraft, on a five year rolling

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average basis. The recharge program is described as a combination of direct recharge via land application and in-lieu recharge. It does not state that surface water is being used to address the entire 3,400 acre-feet of existing overdraft. Indeed, a substantial portion of the intended 3,400 acre-feet of recharge is intended to come from direct recharge, which was to result from the conjunctive reuse of the effluent. This is further emphasized at page 22, where the County approved IMP notes, "***[A]ll wastewater effluent shall be conjunctively reused within RCWD either as reclaimed water or for agricultural irrigation***".

Page 29 of the IMP discusses the extent of commitment to surface water imports in more detail. It states that proposed in-lieu system will deliver approximately 3,304 acre-feet of irrigation water annually. It further states, "***The commitment of the Project through combined groundwater overdraft reduction programs is to perform 3,400 AF/year of recharge as measured on a rolling five-year-average basis, an amount adequate to eliminate the current groundwater deficit within RCWD.***"

In limitation of that commitment, it further states "***There is no intent to fully-utilize these in-lieu facilities every single year, and there is no commitment to increase the 3,400 AF/year contribution from the combined groundwater overdraft reduction programs toward district-wide overdraft even if subsequent study shows the estimated overdraft to have increased***".

The IMP make clear that the primary surface water supply to be used to augment the conjunctive use of effluent is contracts for Section 215 flood flows and Class 2 water supplies. The Specific Plan IMP does not primarily rely upon, nor commit Root Creek to provide as a Project requirement, the "up to" 7,000 acre-feet of water available under Westside Water Company contract that was subsequently assumed by Paramount Land Company. Regarding the commitments to the use of that Paramount water to benefit the aquifer, the IMP states "***It is again noted that the back-up water supply is intended as a fail-safe, and under ideal or average conditions will not have to be used to maintain the required rolling-average water balance. It has been put in place only to assure stakeholders that the project's water supply is not at risk in even a series of dry and very-dry years.***"

Based on the actual language of the Specific Plan's commitments, there is no commitment to supply 3,400 acre-feet of surface water annually. Nor is there a commitment to supply any of the water made available under the contract with Paramount.

More fundamentally, there is no description of how the impact of changing from conjunctive use of all effluent, to percolation of effluent, will change the previously evaluated water balance calculations. We know that Provost and Pritchard

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believes that percolated effluent will be a significantly diminished benefit to the underlying aquifer, versus the original Project's intended application to crops. We also know that the Specific Plan confirms that there is no intent to adopt additional measures to address changes in the previously assumed groundwater overdraft. How the change to percolation of effluent, versus conjunctive use, will be addressed in these water balance commitments is unknown. It is a new significant impact, arising from significant changes in the Project, which were not previously analyzed in the prior EIR. Major revisions to the EIR must be made to address this new impact. Those revisions should be subjected to public review and comment, as either a Subsequent EIR or Supplemental EIR.

c. Change in Intended Disinfection of Effluent. In its statement of CEQA Compliance, the Report of Waste Discharge inaccurately states that the original intended design for the Phase A Project was to include an undisinfected design. This statement is contradicted by that Report's own immediately following paragraph, which quotes from the EIR certified for the Project. That paragraph quoted from the EIR states that "*The Phase A WWTP would be designed to treat wastewater to disinfected secondary standards suitable for irrigation on agricultural lands, such as citrus trees in the Effluent Disposal Area.*" (Emphasis added) Therefore, in describing its intended CEQA Compliance, the Report of Waste Discharge fails to acknowledge (and perhaps innocently misrepresents) the fact of the change from disinfected to undisinfected design.

The negative consequences of percolating undisinfected effluent into the groundwater table is addressed in the AECOM study that was provided with our prior correspondence. AECOM has now had the opportunity to evaluate the complete Antidegradation Study for the Project. As reflected in the attached report, AECOM reconfirms its prior conclusions about the environmental impacts of this change to the Project.

d. Broader Consequences of Change to Percolation Design. The Regional Board's requirement of an Antidegradation Study, as a condition of allowing the Project to use of percolation ponds to discharge treated effluent, is, in itself, substantial evidence that there has been a significant change in the Project. The Project's Certified EIR did not incorporate any of the analysis detailed in the Antidegradation Study because the Project described in the EIR relied disposal of the effluent through application to agricultural crops (and lined ponds for interim storage).

The Antidegradation Study submitted by Root Creek may provide much of the analysis that a Subsequent or Supplemental EIR would require to evaluate the impact on the groundwater of effluent constituents from the new percolation strategy.

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However, the fact that this Project element requires substantial additional environmental evaluation demonstrates that this change in the Project is significant.

As noted above, there are errors in the Antidegradation Study's discussion of the commitments for water balance made in the adopted Specific Plan. This letter is able to discuss those errors only because we were able to obtain that study as a result of a Public Records Act request. Other errors may be identified if the document was made available for broader public evaluation, consistent with the policies of CEQA. Therefore, the significant new evaluations of the Project's impact that result from effluent percolation, as detailed in the Antidegradation Study, should be circulated for public review and comment, as part of a Subsequent or Supplemental EIR.

Section 8 of the Antidegradation Study incorporates an analysis of the costs and benefits of percolation versus other strategies, including the strategy of storing and applying the effluent for agricultural irrigation (the strategy assumed and evaluated in the Certified EIR). This further reflects that the environmental impacts resulting from the proposed change in the Project can only be justified by a weighing of the benefits and the costs of the originally proposed effluent disposal strategy. That level of Project evaluation of a significant Project change can only be done through an appropriate Subsequent or Supplemental EIR.

5. Conclusion. For the reasons stated above, your Board is urged to require the completion of a Subsequent or Supplemental EIR before it authorizes the Project to change to percolate the effluent in the groundwater. Substantial evidence supporting such a requirement is detailed above. Please ensure that this letter and all referenced enclosures are included in the Record of Proceedings regarding the above referenced matter.

Sincerely,

McCORMICK, BARSTOW, SHEPPARD,
WAYTE & CARRUTH LLP



Jeffrey M. Reid

Enc. Exhibit A - WSA for Gateway Village Project
Exhibit B - Memorandum of Provost & Pritchard
Exhibit C - Report of AECOM
Exhibit D - IMP for Gateway Village Project Specific Plan

EXHIBIT “A”

WATER SUPPLY ASSESSMENT

FOR

GATEWAY VILLAGE

A Castle and Cooke Development

July 2006

Prepared For:

Root Creek Water District

Prepared By:



DATE SIGNED: _____

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**Water Supply Assessment for Gateway Village
Castle and Cooke, Inc.**

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Appendices

- A - Water Supply Agreement between Root Creek Water District and Westside Mutual Water Company
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- C - Agreement between Madera Irrigation District and Root Creek Water District for the Conveyance and Sale of Water
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Executive Summary

The purpose of this Water Supply Assessment is to evaluate the ability of the Root Creek Water District to meet water supply demands associated with the proposed land-use changes for the Gateway Village project, in accordance with the requirements of Section 10910, et seq, of the California Water Code. Gateway Village will be a 2,072-acre residential development in Southeastern Madera County, California.

This water supply assessment will serve also as the Water Supply verification required under Government Code 66473.7.

This Water Supply Assessment discusses the estimated water demands and proposed water sources for this new development. This report provides a summary of water supply calculations and evaluations. For more detailed water demand and supply information the reader is referred to other documents, principally the 2006 *Gateway Village Infrastructure Master Plan and the 2001 Hydrogeologic Investigation – Southeastern Madera County*. The estimated average-annual demand of 6,374 acre-feet will be met with the following water supplies:

- Local groundwater pumping
- Reclaimed wastewater (approximately 30% of water supplies will be recycled)
- Water purchased from Westside Mutual Water Company through a contract that can provide a firm supply of 7,000 acre-feet/year
- Surplus and flood water purchased from Madera Irrigation District through a sale and conveyance agreement. Long-term water availability from the contract is estimated to average 7,335 acre-feet/year.

The aforementioned water supplies provide, on average, considerably more water than will be necessary to meet water demands. This will provide Gateway Village with the flexibility to choose among water sources in some years.

Gateway Village will also practice intentional and in-lieu groundwater recharge to arrest the local groundwater overdraft. Gateway Village has committed to correcting the overdraft for the entire Root Creek Water District (estimated to be 3,400 acre-feet annually), even though Gateway Village will only cover about 15% of the District. Groundwater recharge will generally be higher in wetter years, with higher levels of groundwater pumping in dryer years. Due to this normal variation in supply availability, the project will balance groundwater supplies on a rolling 5-year average. Various recharge facilities will be constructed and programs will be implemented. The programs will have almost twice the available water supply needed to arrest the local groundwater overdraft. This will provide Gateway Village with the flexibility to select the programs that are the most economical and practical to implement at any given time. The in-lieu recharge facilities will be constructed with Phase 1 of the project.

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This Water Supply Assessment concludes that sufficient water supplies will exist to satisfy the projected 20-year demands for the Gateway Village development during normal, single-dry, and multiple-dry years.

This Water Supply Assessment relies upon draft versions of several agreements, which are attached as appendices. Each of these agreements must be completed and executed by all parties involved for this Water Supply Assessment to be complete and valid. The agreements are advanced enough that no material change in conclusions is expected during final drafting, and the text of this report assumes that approval has occurred.

1 - Introduction

The purpose of this Water Supply Assessment is to evaluate the ability of the Root Creek Water District to meet water supply demands associated with the proposed new developed land uses of the Gateway Village project, in accordance with the requirements of Section 10910, et seq, of the California Water Code. Gateway Village will be a 2,072 acre residential development in Southeaster Madera County, California.

In order to adequately address the sufficiency of water supply sources for future developments, and in an attempt to prevent major development projects from being approved without a water supply evaluation, the State of California in 2001 passed into law Senate Bill No.'s. 221 and 610. In October 2001, the Governor signed into law Senate Bill (SB) 610, which amended Section 10910, et seq, of the Water Code, requiring preparation of a Water Supply Assessment as part of the environmental review process for new development projects. A project is defined in the California Water Code as any proposed residential development having more than 500 dwelling units, or a public water system that has less than 5,000 connections with a proposed project that will account for a 10% or more increase in the number of service connections.

That same year, the Governor signed Senate Bill 221 into law, adding Government Code Section 66473.7. This legislation requires a city, county, or local agency, as part of the Tentative Map process, to prepare, or direct the water purveyor to prepare, a Water Supply Verification documenting the availability of a sufficient water supply to serve a subdivision. Although the triggers for compliance with SB 221 are similar to those identified above for SB 610, this law uses a different set of requirements to determine the sufficiency of a water supply.

Since the conditions and requirements of these two bills are similar, this Water Supply Assessment has been structured to comply with the requirements and conditions of both Codes. The proposed project will have more than 500 dwelling units and therefore is subject to both sets of requirements. Refer to Section 2 – State Water Code Requirements, for more information on these mandated reports.

This Water Supply Assessment discusses the estimated water demands and proposed water sources for the new development. This report provides a summary of water supply calculations and evaluations. The reader is referred to other documents, principally the 2006 *Gateway Village Infrastructure Master Plan* for more detailed water demand calculations and the 2001 *Hydrogeologic Investigation – Southeastern Madera County*, for more detailed analysis of groundwater conditions in the regional area of southeastern Madera county. Several water sources will combine to satisfy the project's water needs including groundwater, imported surface water, and reclaimed wastewater.

2 - State Water Code Requirements

2.1 - Water Supply Assessment Requirements

The Gateway Village meets the definition of a “project” under the provisions of Water Code Section 10910 et. seq. and Government Code 66473.7, and so will necessitate preparation of the two water supply reports mandated by these related pieces of legislation:

SB 610 Water Supply Assessment

Water Code Section 10910, et seq, as amended by SB 610 in 2001, defines a “project” as any residential development of 500 or more dwelling units (or equivalently-large commercial development), and requires the water purveyor (the District) or the County itself to prepare a “Water Supply Assessment” prior to project approval. In this case, “project approval” will mean approval of the Gateway Village Area Plan, Specific Plan, and Infrastructure Master Plan. The Water Supply Assessment must be included in the environmental document addressing the potential environmental impacts of the project. In order for the project to be approved, the Water Supply Assessment must conclude that the supply of domestic water available to the development is adequate, and will continue to be adequate over the next 20 years during normal, dry, and multiple-dry years.

SB 221 Verification of Water Supply

SB 221, codified in Government Code Section 66473.7, defines a “project” as 200 or more dwelling units, and requires that a “Verification of Water Supply” be prepared by the water purveyor or the County. The primary difference between this report and an SB 610 Water Supply Assessment is that this report must be made at the time approval is sought for a Tentative Map for any phase of the project. In addition, according to SB 221, the verification of a water supply must: 1) be based on the historical record for at least 20 years, 2) include an urban water shortage contingency analysis, and 3) identify supply reduction for “specific water use sector” per Water Supplier’s resolution, ordinance, or contract.

Since the conditions and requirements of these two codes overlap, this Water Supply Assessment has been structured to address the requirements of both reports in a single document.

2.2 - Urban Water Management Plan Requirements

The California Urban Water Planning Act requires urban water suppliers to submit an Urban Water Management Plan (UWMP) to the California Department of Water Resources (DWR) every five years if they provide water for municipal purposes to more than 3,000 customers or supply more than 3,000 acre-feet annually.

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Gateway Village will have over 7,000 water connections at build-out, and therefore will be required to prepare and submit an UWMP. However, this will not be required until 3,000 residences have been constructed, which will occur during Phase 3 of the five proposed phases. According to the developer's current projections, this is expected to be some time around 2015.

UWMPs often contain most of the information and evaluations needed to prepare a Water Supply Assessment in compliance with the above requirements. Since no UWMP has yet been prepared for Gateway Village, RCWD has relied on other documents to provide the necessary water supply evaluations, namely the 2006 *Gateway Village Infrastructure Master Plan* and 2001 *Hydrogeologic Investigation – Southeastern Madera County*. These documents provide sufficient water demand, supply and policy evaluations to satisfy the statutory requirements for this report. In addition, the IMP has mandated and adopted a number of requirements that would generally be found in an UWMP and are to be incorporated from the outset of the development.

3 - Agencies

The following agencies will play a direct or indirect role in providing water supplies to Gateway Village.

3.1 - Root Creek Water District

Nearly the entire Gateway Village lies within Root Creek Water District (RCWD), a California Water District formed in 1996, which will be the potable water purveyor and will provide wastewater collection and treatment services for Gateway Village. RCWD encompasses about 14,400 acres and its boundary is shown on **Figure 1**. (Those portions of Gateway Village lying outside the current RCWD boundaries are now within the Madera Irrigation District boundary. They will be detached from MID and annexed into RCWD upon approval of development entitlements.) Virtually all lands within RCWD are now in agricultural uses.

RCWD does not currently have the facilities required to produce or distribute potable water or collect and treat wastewater or storm drainage. However, it has the authority under State law to assume those responsibilities and to construct or acquire the necessary infrastructure. The District has indicated its willingness to provide water, wastewater, and storm drainage services to Gateway Village. Wells, water storage, pumping and transmission facilities will be designed and constructed by the developer as part of the project, and will be dedicated to the RCWD for its ownership, operation, and maintenance upon completion.

3.2 - Madera Irrigation District

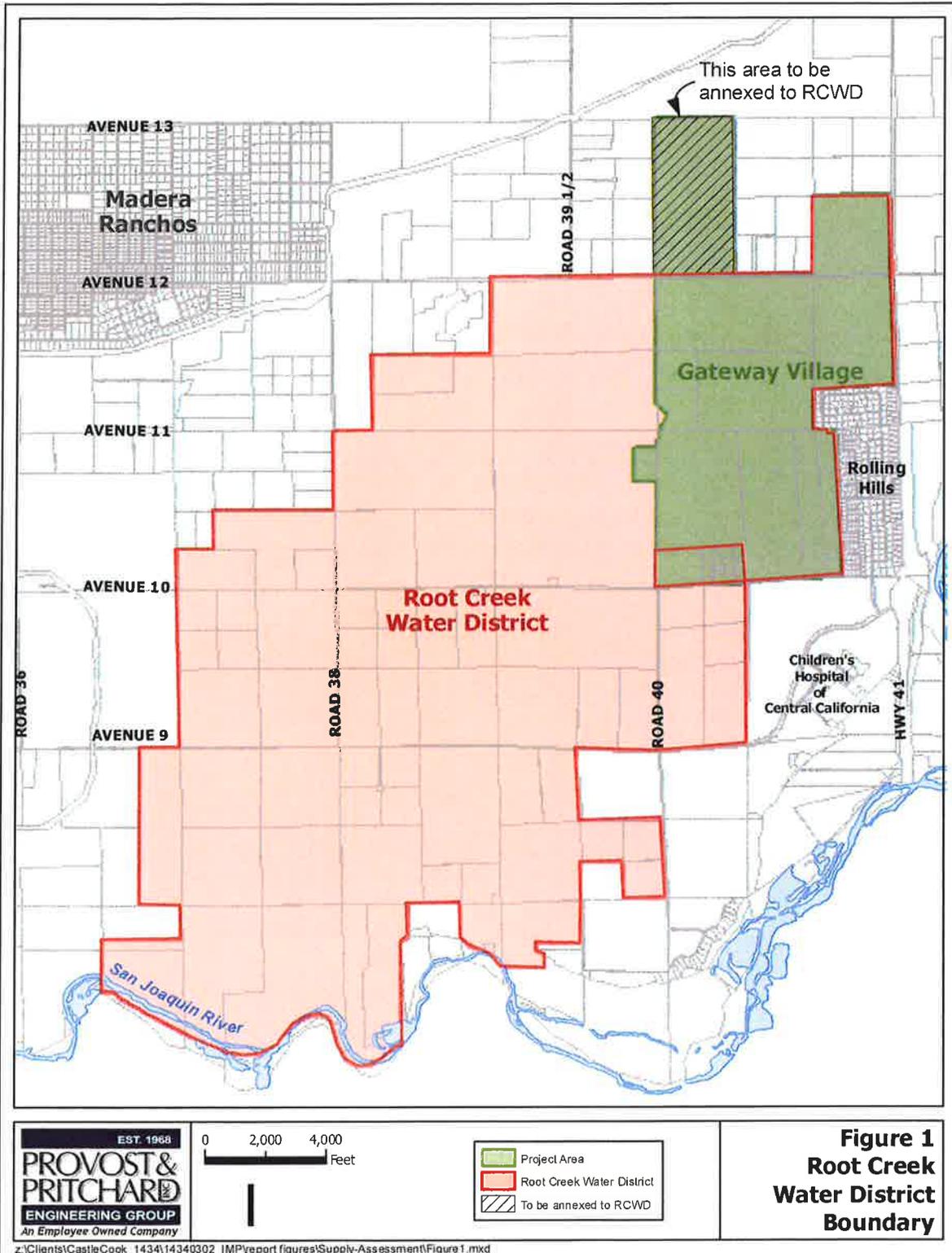
The Madera Irrigation District (MID) encompasses approximately 130,000 acres in Madera County and is adjacent to the San Joaquin River on its southern boundary. MID's water supply derives from multiple sources including water rights on the Fresno River and service contracts for water from the Friant Division of the Central Valley Project (CVP).

RCWD has an agreements (see **Appendices C and D**) to purchase San Joaquin River floodwaters (Section 215 water) and Class 2 CVP water from MID to use as in-lieu groundwater recharge for Gateway Village. In addition, RCWD has a contract (see **Appendix C**) with MID to use MID's conveyance facilities or rights to facilities, namely the Madera Canal and Lateral 6.2, to deliver surface water supplies to Gateway Village and surrounding agricultural lands.

3.3 - Madera County

Madera County has jurisdiction to grant development entitlements within the project area, and is the lead agency for the project Environmental Impact Report. Madera County does not directly operate municipal services in the project area, but instead has created a number of County Service Areas and Maintenance Districts where isolated developments have grown up. Each of these are governed by the Madera County

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Board of Supervisors, with administration and operational staff provided through the Madera County Engineering and General Services Department. In the area of Gateway Village, Madera County manages County Service Area 22, which may become the operations and maintenance authority for roads, bridges, and some other public works within the project area.

3.4 - Westside Mutual Water Company

Westside Mutual Water Company (Westside) is a non-profit company that owns or manages water supplies benefiting over 100,000 acres in Kern County and nearly 1,000 acres in Madera County. Through the ownership of lands in various districts and counties, Westside has control of water supplies through water rights and contracts. Westside also has access to significant groundwater recharge and recovery facilities in Kern County. Under the terms of a water supply contract, Westside is both allowed, and obligated, to deliver the water RCWD requests each year to Millerton Lake for RCWD's account. This contract will provide a firm surface water supply of up to 7,000 AF/year to Gateway Village. Refer to Section 10.2 for discussions on the reliability of this water supply and **Appendix A** for a copy of the agreement between Westside and RCWD.

3.5 - Shafter-Wasco Irrigation District

Shafter Wasco Irrigation District (SWID) is a California Irrigation District in Kern County located about 20 miles northwest of the City of Bakersfield. SWID covers about 38,900 acres. SWID has a contract with the Bureau of Reclamation to obtain water from the San Joaquin River that is diverted at Millerton Lake and delivered through the Friant Kern Canal. This contract includes a Class I CVP water supply for 50,000 AF/year. SWID will serve as a third party in a water exchange between Westside Mutual Water Company (Westside) and RCWD. Westside will send water from a groundwater bank to SWID, and SWID will send a comparable amount of water to RCWD from its Class I CVP water supply.

3.6 - North-Kern Water Storage District

North Kern Water Storage District is located in the north-eastern area of the San Joaquin Valley portion of Kern County adjacent to SWID. North Kern has rights to a variety of Kern County water supplies. Due to its favorable sub-surface geology and the limited surface storage available, North Kern has aggressively developed groundwater recharge facilities. North Kern allows landowners in the District to utilize those facilities to bank the landowner's own water supplies. Westside has taken advantage of the opportunity to bank significant amounts of water in North Kern and intends to continue doing so. North Kern and SWID have also developed (and are developing more) interconnected canal facilities that allow North Kern to provide water to SWID. These facilities are independent of the Bureau of Reclamation facilities. When RCWD requests water, Westside will pump and deliver water from North Kern groundwater banks to SWID, who will deliver a comparable amount of water to RCWD.

4 - Regional Water Supplies

4.1 - Precipitation

Annual rainfall in the Madera County region typically varies from six inches in dry years to over twenty inches in very wet years. The average annual precipitation is approximately ten inches. The contribution of precipitation to urban water demands would include some natural groundwater recharge and effective precipitation for landscaping. However, due to the low overall rainfall these contributions will be small and were not considered in the analysis.

4.2 - Groundwater

Regional groundwater conditions are described in a report prepared in 2001 by KSA and P&P entitled *Hydrogeologic Investigation – Southeastern Madera County*. The report discusses subsurface geologic conditions, groundwater levels, overdraft, groundwater flow, sources of recharge, and groundwater quality in an 87 square-mile study area that includes all of the proposed Gateway Village, all of Root Creek Water District, and a much more extensive portion of Southeast Madera County. The regional study area is shown on **Figure 2**. Groundwater is the area's primary water source. Since the 1960's, thousands of water supply wells have been drilled in the region. Substantial development, including the Rolling Hills subdivision and the Madera Ranchos community, has occurred in many areas without a surface water supply. Consequently, natural recharge has not kept up with the pumpage, and groundwater levels have fallen. Overdraft in the 87 square-mile study area was estimated to be 22,000 acre-feet per year in 2001. Of that, approximately 3,400 Acre-feet per year was estimated to be within RCWD.

4.3 - San Joaquin River

Surface water transfers to Gateway Village are feasible due to its close proximity to the San Joaquin River. Numerous agencies and municipalities have rights to water from the San Joaquin River, which are delivered via the Friant system of the Central Valley Project (CVP) or directly from the San Joaquin River.

San Joaquin River water rights are significant, with 800,000 acre-feet allocated as Class I water supplies and an additional 1,400,000 acre-feet allocated as Class II water. Class I water supplies are considered dependable in practically every year, with partial deficiencies only in occasional critically dry years. Class II water is that water in excess of Class I, and accordingly is less dependable as to its quantity and frequency of occurrence. Class II water supply allotments have averaged 45 percent of Class II contractual amounts since 1966.

A third source of Friant Division CVP water is Section 215 water, which is surplus flood flow on the San Joaquin River. Section 215 water is only available when Millerton Reservoir is in flood release.

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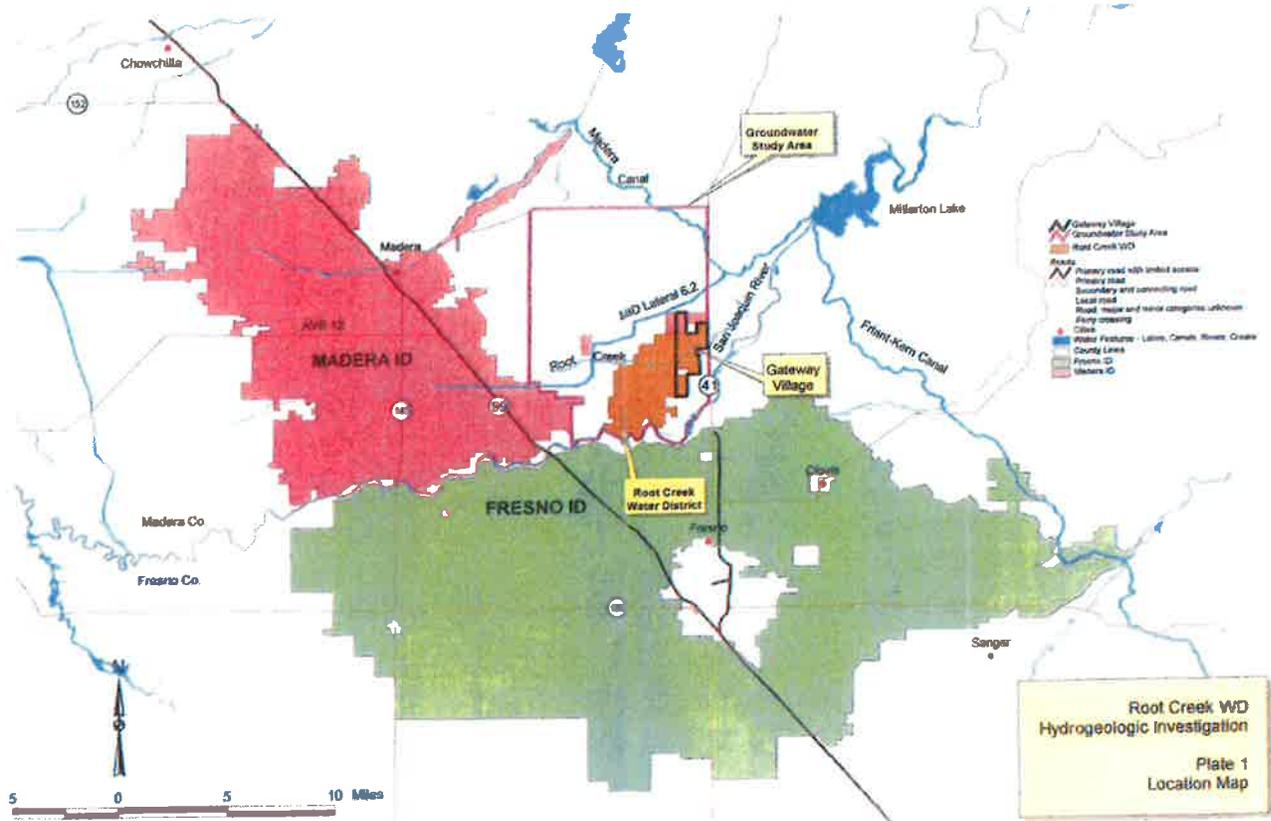


Figure 2 – Regional Study Area

Some lands along the San Joaquin River have the right, by virtue of being riparian or by holding contracts, to divert San Joaquin River water. These are private water rights that permit diversions up to about 200,000 acre-feet/year. According to their agreements, these lands can divert and use water for any reasonable and beneficial use.

Root Creek Water District is located adjacent to the San Joaquin River. As a result, water supplies from other sources (State Water Project, local streams, Kings River, etc.) can feasibly be exchanged for San Joaquin River water and delivered into RCWD and to Gateway Village through a multi-party exchange agreement.

CVP contractors in Madera County include the Madera Irrigation District, Chowchilla Water District, County of Madera, and the Adobe Ranch. Collectively, their contractual water supplies amount to 140,500 acre-feet of Class I and 346,000 acre-feet of Class II water.

4.4 - Madera Irrigation District

The Madera Irrigation District (MID) encompasses approximately 130,000 acres in Madera County and is adjacent to the San Joaquin River on its southern boundary. In addition to its Class I and Class II Friant supplies, MID's water supply derives from multiple sources including water rights on the Fresno River.

MID is a major regional water purveyor. Its primary service area is located several miles to the north and west of the project area, though the portion of Gateway Village not currently within RCWD is in MID at this time. Those lands will be detached from MID and announced to RCWD upon approval of the Gateway Village project entitlements.

MID's conveyance facilities, and its close proximity to Root Creek Water District, offer opportunities for the sale, transfer, or exchange of surface water supplies to RCWD for use in Gateway Village.

4.5 - Local Streams

Several foothill streams contribute to the area's water supply. Three streams with notable flows are Root Creek, Little Dry Creek, and Cottonwood Creek. The flows from these foothill watersheds vary considerably between wet and dry years. These flows contribute to winter irrigations and groundwater recharge, with some significant amounts captured outside the regional study area. Historical flow data is not available for the foothill streams, making accurate monthly flow estimates impossible. However, the lack of detailed data on these streams does not appreciably affect water management decisions, as the flows tend to come over short time periods in the winter when water demands are not high.

5 - Local Water Supplies in Root Creek Water District

5.1 - Precipitation

Precipitation patterns in RCWD are similar to those in the region as described in Section 4.1. Precipitation amounts are low and would not make a notable contribution to urban water demands.

5.2 - Groundwater

Almost all of the domestic and agricultural water demands in RCWD are met with groundwater. All growers own and operate wells to service their property. This has resulted in stress on the local groundwater supply and a condition of groundwater overdraft. KSA (2001) estimated the overdraft to be 3,400 acre-feet/year within RCWD. Following are more details on the hydrogeology of RCWD.

The aquifer below RCWD extends to depths ranging from 1,000 feet to greater than 2,000 feet before basement rock is encountered, but the practical limit of the aquifer is typically considered to be at the base of the fresh water (defined as water containing less than 2,000 parts per million dissolved solids). This zone of fresh water may extend to depths of about 1,000 to 1,200 feet. RCWD does not overlie any of the major confining clay layers that have been identified in the Central Valley. However, the deposits underlying the District are composed of older alluvium and continental deposits that are liable to include interfingering layers of relatively impermeable materials.

Well yields within RCWD typically range from 500 to 1,000 gallons per minute (gpm), though there are exceptions to both ends of this range. The best producing wells in the District yield in excess of 2,000 gpm.

The aquifer currently being used by agricultural wells within the District is approximately 600 feet deep. Some wells tap strata to depths in excess of 1,000 feet, but these are exceptions. Very few water bearing sands exist below 800 feet. Assuming that it is desirable for the water table to come no closer than ten feet from the ground surface, and applying an average specific yield of 0.075 to the aquifer, the total storage capacity of the aquifer in RCWD that is in use can be estimated to be 410,000 acre-feet.

Groundwater level maps are available since the 1930's and have shown a gradual and generally continuous condition of overdraft. Groundwater quality data is limited except for some new samples collected for Gateway Village (see 2006 Infrastructure Master Plan). However, it is known that groundwater has historically been adequate quality for agricultural use.

5.3 - Surface Water Rights

Root Creek Water District does not have a permanent surface water supply, and consequently they have relied almost exclusively on groundwater. The District was originally formed in 1996 to help secure surface water supplies. Some efforts have

been made toward this goal, as discussed below, but no surface water deliveries have yet been made to the District. In addition, no District facilities presently exist to receive, store, and deliver surface water within the District.

In 1999, RCWD signed an agreement with the Friant Water Users Authority (FWUA), Madera Irrigation District (MID), and Chowchilla Irrigation District (CID) to help RCWD purchase surplus waters from the San Joaquin River (see **Appendix D**). The agreement stated that when Friant Contractors do not request delivery of all available San Joaquin River floodwater, the FWUA, MID and CWD will use their best efforts to assist RCWD to obtain those unused flood flows either through USBR Section 215 water purchases, temporary Class II contracts, water transfers, or other means at the lowest prevailing rate. These waters were intended to be used for intentional or in-lieu groundwater recharge, and for anticipated future municipal uses. No water has yet been delivered to RCWD from this agreement, partly due to a lack of conveyance facilities in RCWD, and partly because anticipated municipal developments are still being planned.

Some lands in the southern portion of the District do have the right, by virtue of being riparian or by holding contracts, to divert and use San Joaquin River water. These are private water rights and none of these rights are held by RCWD. A total of about 2,000 acres in RCWD have these rights and the landowners have been diverting San Joaquin River water. According to their agreements, these lands can use water as long as it is considered a reasonable beneficial use. None of these lands are located within Gateway Village.

5.4 - Local Streams

Root Creek is the only significant creek passing through RCWD. Root Creek is a small, intermittent, ephemeral stream originating in the foothills east of RCWD. The Root Creek watershed encompasses 39 square miles and is bisected by RCWD. Water generally drains from the east to the west.

The Root Creek channel has been extensively modified by agricultural operations over a period of decades. In segments the creek channel has a morphology indicative of typical 'drainage ditches'; canalized and denuded of natural vegetation. In many other areas the channel is simply a swale between rows of crops, predominately permanent orchards. Some segments of the Root Creek Channel within the project area are about 5 to 15 feet wide and 1.5 to 2 feet deep. The tributaries are about 1 to 10 feet wide and usually less than 1 foot deep.

Flows from Root Creek vary considerably between wet and dry years and throughout each year. The creek is typically dry from May through October. Root Creek flows contribute to winter irrigations and groundwater recharge, with some significant amounts captured outside the study area. Historical flow data is not available for Root Creek. However, the Root Creek Watershed Field Review (1992) prepared by the Soil

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Conservation Service estimates that the average annual runoff of Root Creek is 1,500 acre-feet. The SCS report mentions that this floodwater flows overland and ponds west of RCWD (presumably at the Santa Fe Railroad grade) until evaporating or recharging the local aquifer. Most of the Root Creek flows cannot be used for agricultural purposes since they tend to occur over short time periods and come during the winter when water demands are not high.

6 - Description of Proposed Development

The Gateway Village development itself is described in the *Gateway Village Area Plan* (2006), a general-plan-level document describing proposed project land uses and character. Additional project details, including proposed zoning, zoning regulations, design guidelines and development standards are set forth in the *Gateway Village Specific Plan* (2006), which implements the Area Plan and provides the legislative foundation for the zoning and land use regulations necessary to implement the vision of the Area Plan. The reader is also referred to the 2006 *Gateway Village Infrastructure Master Plan* (IMP) for detailed information on the proposed development. The IMP sets forth the master plan for infrastructure improvements to support Gateway Village. The IMP also includes most of the water supply analyses described in this report.

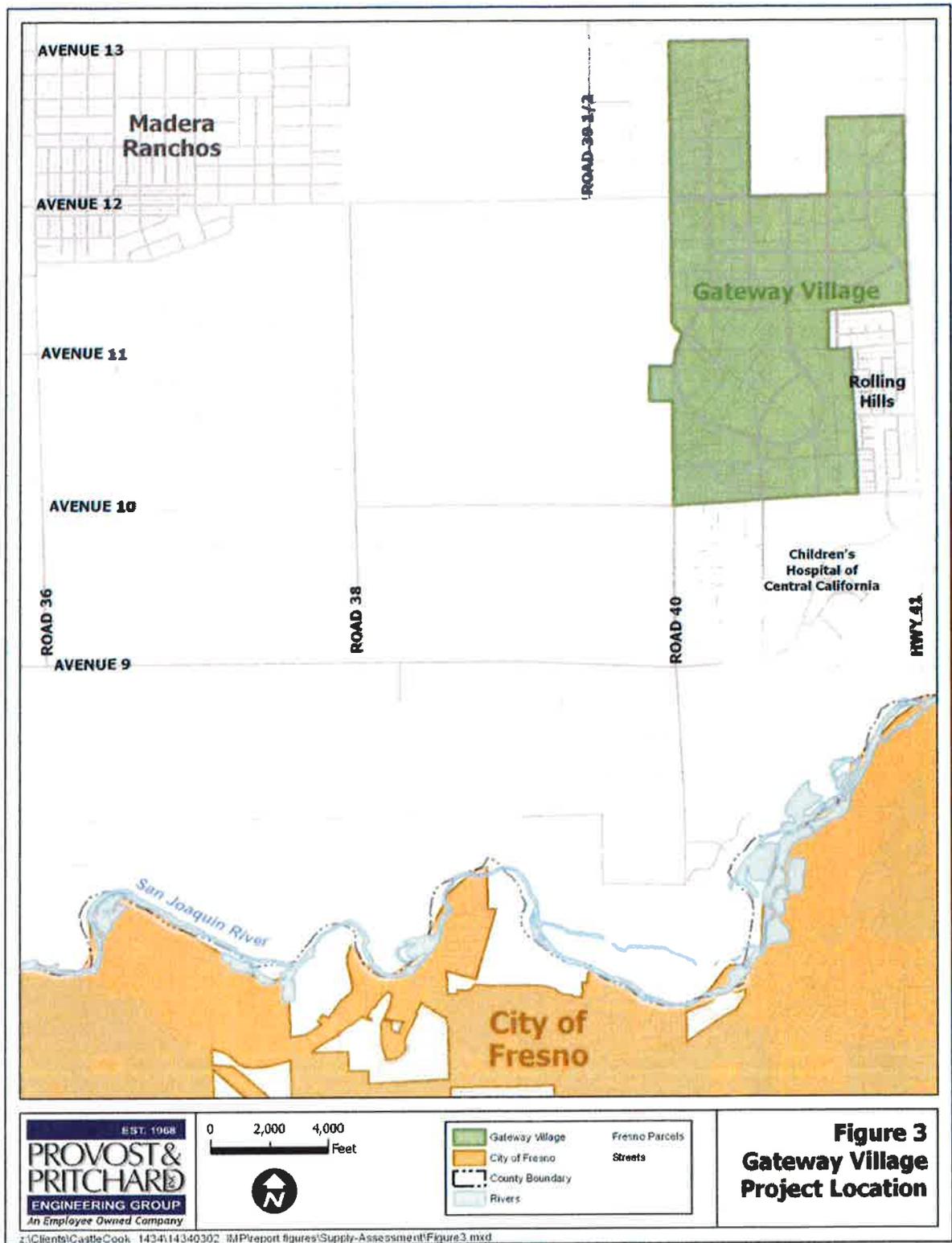
The Gateway Village plan area covers approximately 2,072 acres. The estimated population at total build out is 19,734. Located in southeast Madera County, the site is generally bordered on the east by State Route 41 and the community of Rolling Hills, on the north by Avenues 12, 12-1/2, and 13, on the south by Avenue 10, and on the west by Road 40. The project area is shown in **Figure 3**. The site is approximately equidistant from the City of Madera and mid-town Fresno. Immediately south of the project area lies Children's Hospital of Central California and its surrounding medical offices. Four miles west on Avenue 12 is the community of Madera Ranchos.

The site is generally flat, with large areas of gently rolling topography, and is roughly bisected by the Root Creek drainage, an ephemeral stream. No perennial streams flow through the property; however, other seasonal and ephemeral drainages tributary to Root Creek are visible on topographic maps.

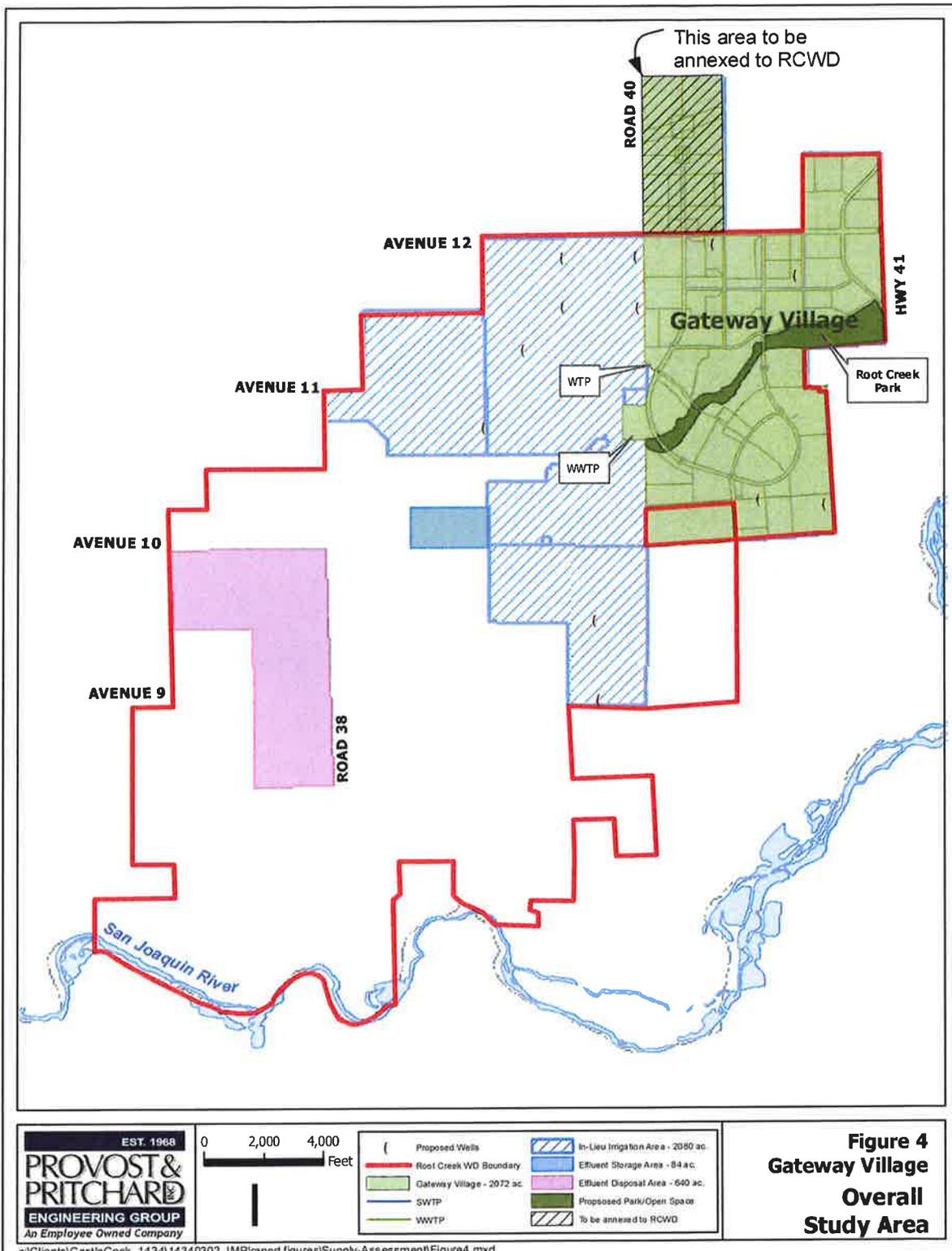
Certain infrastructure improvements related to Gateway Village will be constructed on lands outside of the Village boundary. These include improvements to State Route 41, domestic water wells, wastewater effluent storage and reclamation areas, direct groundwater recharge facilities, and an in-lieu groundwater recharge system. The overall study area is shown in **Figure 4**.

The majority of the project area is now in cultivated, irrigated agriculture (see **Figure 5**). Of the project's 2,072 acres, roughly 1,900 are planted in citrus, pistachio, and olive orchards. The balance of the land is a combination of existing commercial and industrial uses and the Root Creek channel.

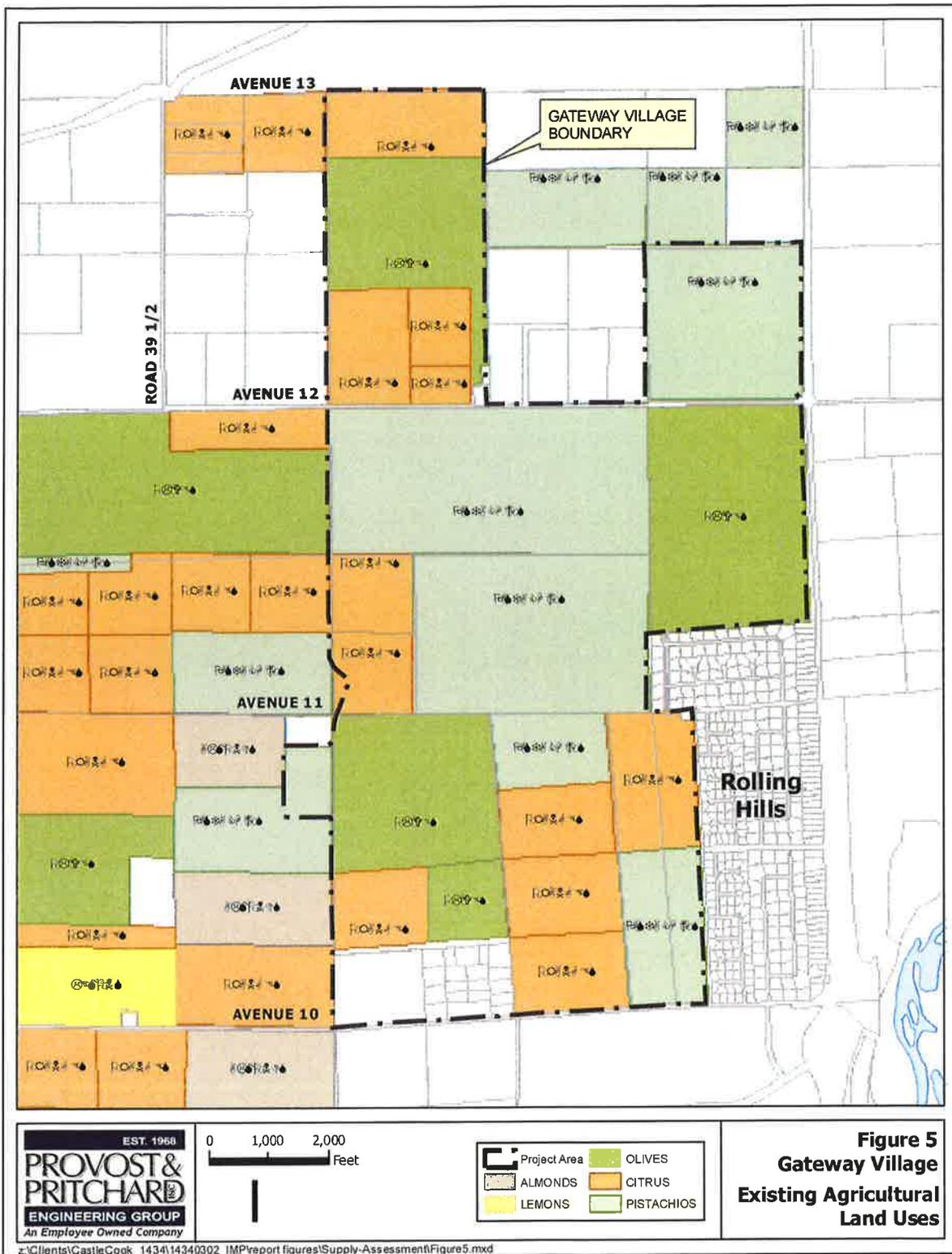
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7 - Existing Water Usage in Project Area

In 2005 the project area was almost entirely developed as irrigated agriculture (see **Figure 5**). All water demands are presently met with groundwater. Based upon published agronomic uptake rates and existing cropping patterns, the current water use within the project area has been calculated to be 6,450 acre-feet annually. Actual usage cannot be measured due to the lack of meters on existing wells. However, the estimated use reflects an average consumptive demand of 3.3 acre-feet/acre, which is reasonably typical of similar agricultural areas. The total consumptive water use within the project at build-out will be approximately 6,374 acre-feet per year (see Chapter 8 – Gateway Village Water Demands and Facilities.) This is approximately one percent less than the 6,450 acre-feet estimated use by the current agricultural enterprises.

8 - Gateway Village Water Demand and Facilities

8.1 - System Overview

A. Water Supplies

Water for municipal and industrial use at Gateway Village will be supplied initially by groundwater wells. These wells may be supplemented by a surface water treatment plant to meet peak demands if required. Appendix E of the 2006 *Gateway Village Infrastructure Master Plan* provides the following recommendations:

“Based on the information obtained as part of this report and the Village of Gateway Groundwater Quality Investigation (June 2004), it is expected that new production wells can be drilled to depths of 500 to 900 feet. From the results of the aquifer testing, and considering well interference, each of the new production wells is conservatively expected to yield at least 600 gpm.

“As reported in Appendix A, the Average Day Demand of the project at build-out will be 3,913 GPM and the Maximum Day Demand will be 8,904 GPM. Meeting the Average Day Demand will require approximately seven wells of the average anticipated yield. However, meeting Maximum Day demand entirely by groundwater sources would require approximately 15 wells if the average anticipated yield is borne out during construction. The new production wells should be constructed approximately one-half mile apart from one another, and while more than seven sites have been identified, it may not be possible to find 15 suitable well sites within RCWD and in close proximity to the project.

“Should the average well yield be better than anticipated, fewer wells would be needed. However, it is likely that the groundwater supplies available will fall short of Maximum Day Demand at build-out, and a Surface Water Treatment plant of some size will be required to supplement well capacity during peak months.

“Assuming the anticipated average well capacity is correct, and that between seven and 10 average-capacity wells will be constructed, the surface water treatment plant's capacity would have to be between 2,900 and 4,700 GPM, or between 4.2 and 6.8 MGD. Final determination of the necessity for and the capacity of the Surface Water Treatment Plant will have to await completion of the proposed wells as the project develops.

“It is recommended that the new wells for the project be located to maximize well production and limit areas of fine sands and problem levels of constituents of arsenic, manganese and HPC. Test wells should be constructed by the casing hammer method at each site, prior to designing the new public supply well. New wells should be designed to minimize sand production and HPC and to minimize the need for treatment of Manganese and Arsenic as discussed in the Groundwater Quality Investigation.”

B. Water Storage and Distribution

Appendix A of the 2006 *Gateway Village Infrastructure Master Plan* provides the following overview of the storage and distribution system proposed for Gateway Village:

“Based on the estimated water use, the requirements for water supply and peak storage facilities were determined. In this analysis, the water supply requirement was assumed to equal the Maximum Day Demand, and storage and booster facilities were sized to satisfy the difference between Peak Hour Demand and Maximum Day Demand. For each pipe, both peak hour demand and maximum day plus fire flow demand were estimated. The greater flow prevailed.

“Transmission mains were sized to carry Peak Hour Demand without fire flow at a maximum velocity of about 5 feet per second. The addition of fire flows to the Peak Hour Demand will not significantly increase the flows in the transmission mains.

“Wells will provide domestic water for the early phases of development to occur north of Root Creek. To support these phases, a firm well supply capable of meeting a Maximum Day Demand of about 6,680 gpm (firm supply, after redundancy considerations are resolved), will be required to complete Phases 1 through 3, including the GV-MU and GV-C areas. To provide necessary redundancy, the installed water supply capacity must be discounted by the redundancy factors set forth in the body of the IMP, which will vary depending upon the number of wells actually required.

“Transmission mains from the well supply area to Phase 1, and storage facilities for Phases 1 through 3, GV-MU and GV-C will be the initial construction for the system. These facilities have been sized to carry Maximum Day Demand flows from the well field into the developed area. Because the Peak Hour Demand for these areas is expected to be about 8,971 gpm, the storage and booster facilities must be sized for at least 2,291 gpm (the difference between MDD and PHD).

“A 1.0 Million Gallon (MG) tank will be required for supplying Peak Hour Demand and fire flows; more storage capacity may be advisable to cover possible temporary interruptions in water supply, depending upon the actual number of wells constructed and placed into service. This determination cannot be made until actual water production quantities are known. If about 25% of the 1.0 MG storage (2 hour fire flow of 2000 gpm, or 240,000 gallons) is assumed reserved for fire flows, the 1.0 million-gallon tank could supply the difference between Peak Hour Demand and the supply (equal to Maximum Day Demand) for approximately 6 hours, a reasonable duration.

“For the remaining phases south of Root Creek (Phases 4 and 5), a combination of wells and surface water treatment is anticipated. The total supply should at least equal the projected Maximum Day Demand of 8,672 gpm. The storage and booster facilities would be required to supply the additional 2,797 gpm needed to meet Peak Hour Demand of 11,469 gpm. An additional 1.0 MG of storage, located near the WWTP and

the Surface Water Treatment Plant, is recommended for construction with the Phase 4 improvements. Wells and water treatment plant capacity can be added incrementally as phases are approved for construction.”

Section V. of the 2006 *Gateway Village Infrastructure Master Plan* gives additional information on design standards, including required system pressures, design supply capacities, fire flows and storage requirements. The design standards set forth in the IMP are consistent with industry standards and the existing practices in neighboring communities.

C. Water Treatment

Treatment of both groundwater well supplies and surface water supplies are addressed in appendices to the 2006 *Gateway Village Infrastructure Master Plan*. Appendix B addresses surface water treatment as follows:

“Treatment of surface water will conform to the applicable Department of Health and EPA regulations in effect at the time of design and construction. The current plan is to use a membrane microfilter plant rather than a granular media filter with conventional sedimentation. The microfilter technology is more able to deliver potable water, meeting primary and secondary drinking water standards. In addition, the membrane technology is modular, making it readily expandable and suited to this phased development.

“Final design of the surface water facility will require testing of the raw water delivered so that appropriate treatment chemicals can be selected. Most membrane manufacturers have the ability to provide pilot test equipment on site to demonstrate the adequacy of their equipment. Unless a suitable lengthy track record can be demonstrated for a selected equipment type on a similar water supply, the use of pilot testing is encouraged.

“Prior to membrane treatment, it is likely that the raw water will need to be pre-treated to remove large particles. This pretreatment process allows the membranes to be sized for higher throughput, reducing the overall cost of the installation. Numerous types of pretreatment processes are now available, and more are likely to be developed prior to the design of the treatment plant. An analysis of various types at that time is appropriate. “

Section V. of the 2006 *Gateway Village Infrastructure Master Plan* addresses treatment of groundwater supplies:

“At minimum, groundwater used for municipal and industrial supply shall be disinfected in accordance with DHS requirements. All groundwater sources shall be tested for the presence of contaminants, against the primary and secondary drinking water standards. Additional treatment systems shall be designed and constructed as required to assure that all groundwater supplies are in conformance with those standards.

“Wellhead filtration systems shall typically be modular micro-filtration units, acceptable to the Department of Health Services (DHS) for removal of the contaminants present in the given well.”

The treatment methodologies are of necessity general in nature. No specific recommendations can be made until specific water samples are available and the required treatment program is developed. However, there is enough information available from the testing reported in the IMP to conclude that the available water supplies can be treated to meet DHS primary and secondary standards with conventional and readily-available technologies.

8.2 - Water Demands

All water demand estimates for this project are based on the zoning and land use classification exhibits contained in the 2006 *Gateway Village Infrastructure Master Plan*. According to the IMP, Gateway Village will be limited to 6,578 units distributed across single-family residential units of various lot sizes and multi-family housing. Land uses within the Village also include: commercial areas, schools, employment centers, parks and open space. Potable water demands for Gateway Village were estimated based on land use type and historical unit use factors for similar development in the City of Clovis, California. Using this method, the average annual demand for the proposed Gateway Village was estimated to be 6,374 acre-feet. Peak Hour and Maximum Day demands were also calculated using standard peaking factors. The peak flowrates will be used to design conveyance, storage and pumping facilities. Refer to Appendix A in the *Gateway Village Infrastructure Master Plan* for detailed discussion of water demands along with sample calculations.

8.3 - Water Conservation Policies

The following is taken from Section V. of the 2006 *Gateway Village Infrastructure Master Plan*.

“Water conservation and reclamation will be emphasized in project design, in order to meet the water use goals stated in the Area Plan EIR and reduce groundwater overdraft attributable to the project. Water-conserving plumbing fixtures and conjunctive reuse of reclaimed water are principles central to the project design standards.

“RCWD has not adopted any policies of its own concerning municipal water conservation. Should RCWD not adopt its own water conservation requirements prior to building occupancy, the project would be subject to Madera County’s Water Conservation Ordinance No. 532 (MCC Chapter 13.55) until such time as RCWD adopts its own ordinance or policies.

“Consideration will be given in project design for use of reclaimed water (treated, disinfected wastewater effluent) for irrigation of parks and publicly-maintained open spaces (trails, road medians, landscape easements) wherever practical and

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economically feasible. This may mean that certain parks, medians, etc., are irrigated by reclaimed water while others are irrigated by the domestic supply or from agricultural wells converted for such use.

“Irrigation of portions of the project using reclaimed water is to be just one of the tools employed to achieve conjunctive reuse of effluent and help maintain a balance of water supply and demand in the project area. Effluent not used for open-space irrigation within the project area will be used for irrigation within the designated Effluent Disposal Area. Groundwater that would have otherwise been used for that purpose, would then become available for use by the project’s domestic water system, meaning the overall water balance would be the same in either case.

“In the early phases of the project, quantities of effluent available for use as reclaimed water will be quite limited. Only as the number of completed dwelling units increases will the quantity of reclaimed water become large enough to irrigate major landscape areas within the project. Nothing in this IMP shall be construed as requiring use of reclaimed water for irrigation of any or all of the parks and open spaces within the project area, but all wastewater effluent shall be conjunctively reused within RCWD either as reclaimed water or for agricultural irrigation.”

Madera County Code Chapter 13.55, Water Conservation, is attached to this Water Supply Assessment as **Appendix E**.

9 - Gateway Village Proposed Water Supply

9.1 - Groundwater

The proposed Gateway Village will rely partially upon groundwater to meet the domestic water demands. RCWD will first develop sources of groundwater by constructing wells both within the project boundaries and on adjacent lands, in areas where hydrogeology studies have indicated the most favorable groundwater conditions. These generally lie in the northwest area of the project, southeast of Road 40 and Avenue 12, and outside the project boundaries to the south and west (See **Figure 4**).

Based on the information in the *Infrastructure Master Plan* (2006) and the *Village of Gateway Groundwater Quality Investigation* (June 2004), it is expected that new production wells will be drilled to depths of 500 to 900 feet. From the results of the aquifer testing, and considering well interference, each of the new production wells is conservatively expected to yield at least 600 gpm. As reported in Appendix A of the IMP, the Average Day Demand of the project at build-out will be 3,913 GPM and the Maximum Day Demand will be 8,904 GPM. Meeting the Average Day Demand will require approximately seven wells of the average anticipated yield. However, meeting Maximum Day demand entirely by groundwater sources would require approximately 15 wells if the average anticipated yield is borne out during construction. The new production wells should be constructed approximately one-half mile apart from one another, and while more than seven sites have been identified, it may not be possible to find 15 suitable well sites within RCWD and in close proximity to the project.

Should the average well yield be better than anticipated, fewer wells would be needed. However, it is likely that the groundwater supplies available will fall short of Maximum Day Demand at build-out, and the IMP proposes construction of a Surface Water Treatment plant of some size to supplement well capacity during peak months.

Assuming the anticipated average well capacity is correct, and that between seven and 10 average-capacity wells will be constructed, the surface water treatment plant's capacity would have to be between 2,900 and 4,700 GPM, or between 4.2 and 6.8 MGD. Final determination of the necessity for and the capacity of the Surface Water Treatment Plant will have to await completion of the proposed wells as the project develops.

9.2 - Surface Water

Surface water supplies available to Gateway Village will be used in a variety of ways to support the water demands of this development. At this time, most of the surface water supplies that are available to RCWD are from flood flow releases or exchange contracts of San Joaquin River water that is stored behind Friant Dam. Use of these water supplies by RCWD is made possible by the following agreements:

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1. Agreement with Westside Mutual Water Company (see **Appendix A**) to provide a firm water supply of 7,000 AF/year from May to September of each year.
2. Agreement allowing RCWD the option to purchase surplus waters from Madera Irrigation District (see **Appendices C and D**). Based upon historical precipitation trends and records, these supplies have averaged 7,335 acre-feet/year.

Water supplies will be delivered to RCWD for use by Gateway Village from the San Joaquin River via the Madera Canal, Lateral 6.2, and the RCWD in-lieu recharge pipeline. For additional information on the phasing of the Gateway Village surface water conveyance system, please refer to the *Gateway Village Infrastructure Master Plan*.

During the initial stages of development within Gateway Village, surface water will be used to augment the irrigation needs of existing farmlands located southwest of this development. As Gateway Village continues to grow, the additional water demands will be satisfied by a combination of ground water and, if required, direct delivery of treated surface water.

The anticipated water demand for Gateway Village at build-out is 6,374 AF/yr, of which, approximately 4,200 AF, or 66% (assuming typical monthly municipal water usage patterns) is needed during the delivery period specified within the Westside agreement. The 2,170 AF of remaining municipal demand may be provided by pumped groundwater or surplus waters from MID. Alternatively, Westside water deliveries in the contractual window from May to September that exceed demands could be recharged and later extracted.

Refer to Section 10 for more details on the two surface water supplies, particularly discussions on their reliability.

9.3 - Reclaimed Water

Reclaimed water from the Gateway Village Wastewater Treatment Plant will be used to irrigate crops on nearby farms in the designated Disposal Area and possibly turf on public lands within Gateway Village. The reclaimed water delivered to the Effluent Disposal Area will not directly contribute to Gateway Village water demands, but will serve as in-lieu groundwater recharges since these farms currently rely on groundwater to meet all of their water demands. The reclaimed water will be a firm water supply. Its availability is assured as long as the effluent is adequately treated to regulatory levels that allow application for irrigation. At total built-out water demands in the Village are estimated to be 6,374 AF/year, and reclaimed water is estimated to be 1,975 AF/year, or about 30% of the total water demand. Reclaimed water will be available in proportion to the volume of water used by the Gateway Village residents. Water uses will gradually increase as incremental phases of the project are completed.

10 - Water Supply Reliability

This section discusses the reliability of the three proposed water supplies (groundwater, surface water, and reclaimed water) in normal, dry and multiple dry years, as well as the timing and variability of the water deliveries from each source.

10.1 - Groundwater

Gateway Village will rely solely on groundwater supplies during early phases of the project, and will be the predominant source throughout the life of the project. As is discussed in following sections, the local aquifer has been in a state of overdraft for many years. Root Creek Water District (RCWD) will not be able to certify a water supply assessment based upon an overdrafted aquifer, unless there is assurance of a secondary water supply available to supplement the groundwater. Surface water supplies have been secured that will provide a firm and reliable water supply in combination with the groundwater supply. The reliability of the local groundwater supply is dependent on groundwater overdraft, groundwater recharge, groundwater quality, and well capacity. These issues are all discussed below.

Groundwater Overdraft

In 2001, Provost and Pritchard Engineering Group, Inc. (P&P) and Kenneth D. Schmidt and Associates (KSA) prepared a study entitled *Hydrogeologic Investigation – Southeastern Madera County*. The report evaluated current and long-term groundwater conditions within RCWD and in a larger regional area (study area). The study area encompasses approximately 87 square miles (55,485 acres) of urban, open and agricultural lands in Madera County (see **Figure 2**). The RCWD covers about 14 square miles and includes a significant portion of the southeastern part of the study area. The study found that groundwater is the primary water supply used in the area, and groundwater levels have continued to decline since development began in the early 1900's. Groundwater overdraft in the larger study area was estimated to be 22,000 AF/yr. Included in this is about 3,400 AF/yr in the RCWD. The study states that new surface water supplies, recycled water, stormwater recharge, or in-lieu groundwater recharge will be needed to sustain the local groundwater supply. All of these are being proposed for the Gateway Village development.

The study also projected water demands into the year 2020. The study anticipates that water demands will increase by 3% from 1995 to 2020. The increase is small because almost all the lands are already fully developed as agricultural uses and utilize groundwater. New urban developments will likely be required to balance their local water supplies, similar to Gateway Village, and therefore would not contribute to increased overdraft either. Thus, the current groundwater overdraft is considered a realistic estimate for the future. This 3% increase in demand is assumed to be met with alternative water supplies and not increased groundwater pumping.

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Castle and Cooke, Inc.**

Groundwater Recharge

Gateway Village has agreed to help RCWD implement several programs that will arrest RCWD's contribution to groundwater overdraft. Through a variety of programs, including intentional and in-lieu groundwater recharge, RCWD has proposed to recharge, on average, 3,400 AF/year. This is equal to the estimated overdraft in all of RCWD. Gateway Village is making this commitment to help RCWD achieve this goal even though the Village will only cover about 15% of RCWD. Therefore, these overdraft reduction measures will benefit the regional area and not just the area proposed for Gateway Village.

Table 1 lists the programs that will be used to reduce groundwater overdraft. These programs have a greater capacity than is needed to arrest the current overdraft. All of the programs will be constructed and ready to implement after full build-out. This will provide RCWD with the flexibility to select the programs that are the most economical and practical to implement at any given time.

Table 1 - Groundwater Recharge Potential of Facilities Impact of Gateway Village at Full Build-Out			
Description		Overdraft Change (AF/yr)	Cumulative Overdraft with Changes (AF/yr)
Total Estimated Current Overdraft in RCWD (from Hydrogeological Investigation of Southern Madera County, Schmidt, 2001)			-3,400
Groundwater Overdraft Reduction Programs			
1	Change in Overdraft from Development of Property [Difference between Total Project Water Demand (6,374AF/yr at buildout) and Current Use from Schmidt 2001 (6,450AF/yr)]	76	-3,324
2	In-lieu Program (Reduced by Developed Acreage, from In-Lieu Update 7/2006)	2,302	-1,022
3	Reuse of Treated Wastewater Within Village (Estimate from Infrastructure Masterplan)	374	-648
4	Reuse of Treated Wastewater Outside Village (Agricultural Irrigation Within Effluent Disposal Area)	1,089	441
5	Recharge by Conjunctive Use of Stormwater Facilities (Structures along Root Creek)	990	1,431
6	Recharge at Dedicated Recharge Basin (Root Creek Basin at Road 35)	1,000	2,431

Some groundwater will be recharged with imported surface water. The water will be delivered to RCWD through facilities owned and operated by Madera Irrigation District (MID) and a new pipeline to be constructed by RCWD. Refer to **Appendix B** for an agreement for the pipeline easement, and **Appendix C** for RCWD's agreement to utilize MID's conveyance facilities.

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Groundwater recharge will replace 3,400 acre-feet of water annually on a 5-year rolling average basis. Groundwater recharge facilities, with their large annual capacities, will be used to the fullest during above-normal water years to raise the five-year average, but may not be used during dry years when the identified water supplies are not available. Refer to the 2006 *Gateway Village Infrastructure Master Plan* for specific details on the overdraft reduction programs listed in Table 1.

Groundwater Quality

Known water quality problems in the project area include elevated levels of manganese, arsenic, iron, and Heterotrophic Plate Count (HPC) in the wells. Consequently, wells will be sited in locations, and water extracted at depths, that are generally free of these problems. Numerous groundwater samples have been tested to help identify areas of concern. In addition, test wells will be constructed at each site to gather water quality data prior to construction of a production well. If necessary, wellhead treatment can be added to address water quality concerns, however, to avoid the added costs, all reasonable efforts will be made to avoid wellhead treatment through careful selection of well locations. Refer to Appendix F in the 2006 *Gateway Village Infrastructure Master Plan* for an extended discussion on groundwater quality issues and complete test results.

Well Capacity

Hydrogeological investigations conducted as part of this *Infrastructure Master Plan* indicate suitable water strata, especially in the northwesterly part of the project area, which can be reasonably estimated to produce drinking-quality water between 80 and 100 percent of the total consumptive water supply required for the project (see Appendix E in the *Infrastructure Master Plan*). Much more groundwater can be produced if wells are located outside of this targeted area, but data indicate a much higher possibility of chemical concentrations requiring treatment of some kind (filtration, chemical reaction or both) prior to municipal use. If groundwater levels decline then new wells can be added, or existing wells can be deepened, to satisfy water demands.

10.2 - Surface Water

Westside Mutual Water District Water Supply

Root Creek Water District (RCWD) has entered into an agreement with Westside Mutual Water Company (Westside) to provide RCWD with a firm water supply. The agreement can be found in **Appendix A** and is also described in Section 9.2. Under the agreement, Westside would bank water in the North-Kern Storage Water District (North Kern) and deliver the water to Gateway Village through a multi-party exchange agreement. The initial term of the contract is 25 years, and RCWD will have the option to renew for an additional 25 years.

In brief, Westside water stored in North Kern would be delivered to water users in Kern County in exchange for those users' water in storage at Friant Dam. The Friant water

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would be released into the San Joaquin River and diverted by Madera Irrigation District into Lateral 6.2, which runs generally east and west just north of the northernmost boundary of Gateway Village. Under the proposal, Gateway Village would construct and dedicate to RCWD a diversion on Lateral 6.2 and a pipeline along the Road 40 alignment, which would be capable of delivering water to lands within and west of the project, and to the surface water treatment plant proposed for Phase 4 of the project. This program, known as "in-lieu irrigation" because the surface water so delivered would be used "in lieu" of pumped groundwater, is described in detail in the IMP.

As of May, 2006, Westside has banked groundwater within North Kern on its own account and has the current right to withdraw and transfer about 30,000 acre-feet of the stored water. Westside also has the right to bank additional water in North Kern, and has other water banked within Kern County that would allow Westside to fulfill its obligation under the agreement for a 50-year term. Westside would deliver water to Gateway Village during the high-demand period of April through September. The contracted water supply quantity would gradually increase up to a maximum of 7,000 AF per year at build-out. The total estimated water demands for Gateway Village at build-out are 6,378 AF/year.

Suspension of Performance

Westside would only be able to suspend its delivery obligations to RCWD if there is a force majeure (unexpected or uncontrollable event). The agreement describes three possible force majeure events:

- 1) *A reduction in SWID's Class I contract to less than 30,000 AF upon renegotiation of SWID's long-term water supply contract with USBR.* Currently, SWID has a Class I CVP contract for 50,000 AF/year. Renegotiation of water supply contracts are largely based on the volume of water that has been historically and beneficially used. SWID has been able to beneficially use most of its CVP water supply and a reduction in their contractual amount from 50,000 AF to 30,000 AF is therefore very unlikely.

River releases to the San Joaquin River are expected to increase as part of a proposed river restoration effort. Currently, the Friant Water Users Authority (FWUA), which represents over 20 water agencies including SWID, and the Natural Resources Defense Council (NRCD) are negotiating an agreement on the volume of additional water to release to the River. However, based on recent discussions, the settlement is not expected to change the CVP contractual amounts. Rather, the river restoration efforts might cause the Class I water supplies to be somewhat less firm since the water for river restoration will have a higher priority than water diverted by FWUA members. However, the agreement makes specific provision for maintaining class 1 supplies in critically dry years.

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2) Reclamation's failure to provide SWID with at least 7,000 acre-feet of Class 1 Friant supply in any year. SWID currently has a CVP Class I water contract for up to 50,000 AF/year. Class I water is generally a reliable water supply and is fully allocated in most years. Delivery of only 7,000 AF would correspond to a 14% allocation of SWID's Class I water supply. Since 1975 the lowest Class I allocation was 25%, which occurred in the critically dry year of 1977 (approximately 28% of average runoff), which followed the critically dry year of 1976 (approximately 41% of average runoff). 1976 and 1977 meet the definition of "back to back critically dry years" set forth in the Water Code standard for supply reliability. A drought with only a 14% allocation would represent an unprecedented occurrence and must therefore be considered extremely unlikely.

The negotiated agreement between FWUA and NRDC for San Joaquin River restoration flows is not expected to impact water supplies to CVP contractors in critically dry years. During recent negotiations, NRDC has proposed to reserve flows during critically dry years for agricultural users, and not river restoration, so that sufficient water is available to protect permanent plantings. Thus, the anticipated settlement will not have any impact on this analysis of water supply reliability in critically-dry years.

It should also be noted that Westside deliveries will be based on a one-to-one ratio with the volume of Class I allocation available to SWID. In other words, the volume delivered to Gateway Village would match the volume allocated to SWID (up to 7,000 acre-feet/year). The 7,000 AF threshold does not represent a level below which Westside would fail to deliver any water, but rather when they could deliver only a portion of the maximum contractual amount. For example, if there were to be a 10% Class I allocation, then $50,000 \text{ AF} \times 10\% = 5,000 \text{ AF}$ would still be delivered to Gateway Village. Only under a 0% Class I allocation would deliveries be completely suspended to Gateway Village. The event of a year so dry that river allocations were completely eliminated is unprecedented and the likelihood must be considered extremely small.

3) Natural disasters, failure of facilities, and acts of God. These are considered reasonable exceptions to Westside's obligation since they would be beyond the control of Westside and could similarly impact any water source. The agreement also states that these cannot be used as exceptions if Westside has reasonable access to other water supplies or conveyance facilities.

In conclusion, the force majeure events allowed under the agreement represent very rare or uncontrollable events. Even with these exceptions, the proposed water supply from Westside is still considered firm and reliable.

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Cover Damages

The contract allows for RCWD to be reimbursed for 'Cover Damages' if Westside fails to perform any of its obligations under the agreement, other than as excused by a force majeure event described above. Cover Damages would include the reasonable cost to secure substitute water supplies. In other words, if Westside failed to meet its contractual obligations, then RCWD could seek out and purchase water supplies on the open market and be reimbursed by Westside.

Breach of Contract

The agreement also addresses a breach of contract by Westside. If RCWD determines that Westside has defaulted on the contract, and that the situation cannot or will not be cured within a reasonable time, then RCWD would have the right to terminate the agreement. RCWD can also recover from Westside the cost to secure an equivalent substitute performance (water supply) from another contractor.

Summary

The agreement with Westside will provide a firm water supply during the months of April to September and will contribute to the overall stability and reliability of the Gateway Village water resources. Westside would only be able to suspend its contractual obligations under extreme and unlikely events. If Westside breaches the contract, RCWD would be entitled to reimbursement for purchasing replacement water supplies or securing a new water agreement with another contractor.

Madera Irrigation District Water Supply

In addition to the contracted water supply from Westside Mutual Water Company, RCWD has the option to purchase other water supplies from Madera Irrigation District (MID). These other water supplies are made possible by RCWD's agreement with MID, entered into on March 13, 2002. A copy of the RCWD and MID agreement is included in **Appendix C**. These other water supply sources include the following: (1) flood flow releases from Friant Dam that are not used by Friant Contractors, (2) water transfers from sources outside of Madera County, (3) water transfers from Central Valley Project (CVP) contract (includes both service and exchange) holders, (4) water transfers from sources within Madera County, and (5) purchase of San Joaquin River water from MID and Chowchilla Water District (additional water supplies may be purchased for other supplemental sources only after seeking to purchase water from MID and CWD). Based upon historical precipitation trends and records, these supplies have averaged 7,335 acre-feet of water annually. RCWD has purchased an option to secure the first right to purchase the first 10,000 AF of surplus water from MID.

Since the aforementioned water supplies are associated with flood flow conditions at Friant Dam, or dependant on water transfer contracts that are currently not in place, the overall reliability (frequency of occurrence) of these supplies is less than the water supply made available by RCWD's agreement with Westside. Even though the flood flows have a low probability of occurrence and are unlikely to be available during

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average, single-, and multiple-dry years, over the term of the agreement with MID these water sources will be available to augment other water supplies, and augment overall water balance.

These water supplies will be used, when available, to positively benefits the 5-year rolling average water balance. Gateway Village will take advantage of these flows, whenever practical, for direct groundwater recharge, in-lieu groundwater recharge, and in place of groundwater pumping.

10.3 - Reclaimed Water

Reclaimed water from the Gateway Village Wastewater Treatment Plant will initially be used to irrigate crops on a nearby farm, which is identified as the Effluent Disposal Area in the *Infrastructure Master Plan* and in the *Report of Waste Discharge*. This parcel is developed as a citrus orchard, and can accept the disinfected secondary effluent which will be produced by the Phase A wastewater treatment plant. Later, after the Phase B tertiary treatment plant is brought on line, effluent may also be used to irrigate turf crops on public lands within Gateway Village.

The reclaimed water will be a firm water supply. Its availability is assured as long as the water is adequately treated to regulatory levels that allow application for irrigation. Reclaimed water will be available in proportion to the volume of water used by the Gateway Village residents. At total built-out water demands in the Village are estimated to be 6,374 AF/year, and reclaimed water is estimated to be 1,975 AF/year, or about 30% of the total water demand.

10.4 - Summary

The proposed water sources can offer a firm and reliable supply to RCWD for supply to Gateway Village. The anticipated water demand of 6,374 acre-feet per year can be met entirely from the agreement with Westside Mutual Water Company (Westside), which will provide a firm water supply of 7,000 acre-feet/year. Although Westside is only obligated to deliver water from April to September, RCWD will have the ability to receive and recharge any deliveries that exceed demand during that period, and extract them for later use. In other words, RCWD could provide 100% of their the Gateway Village water demands from their agreement with Westside. Therefore, groundwater pumping and surplus water purchases can be viewed as auxiliary water supplies. In reality, to ensure flexibility and economy, RCWD will likely pump some groundwater every year and purchase surplus waters from Madera Irrigation District whenever practical. It should also be noted that demands will effectively be reduced by about 30%, since treated wastewater will be recycled in Gateway Village and used on adjacent farmlands as in-lieu recharge. This reduction in demand was not considered in the discussions above and helps to provide even greater security and reliability for the local water supply.

11 - Conclusions

11.1 - Project Impacts

The Gateway Village project is a 2,072- acre development planned for the south-central portion of Madera County. This development will include residential land uses that vary from low to high, mixed use, schools, parks, open space and various types of commercial uses.

The proposed water supplies Root Creek Water District will use to supply Gateway Village were evaluated in accordance with the requirements of Section 10910, et seq, of the California Water Code. The estimated average-annual demand of 6,374 acre-feet will be met with the following water supplies:

- Local groundwater pumping
- Reclaimed wastewater (approximately 30% of water supplies will be recycled)
- Water purchased from Westside Mutual Water Company through a contract that can provide a firm supply of 7,000 acre-feet/year
- Surplus and flood water purchased from Madera Irrigation District through a sale and conveyance agreement. Long-term water availability from the contract is estimated to average 7,335 acre-feet/year.

The aforementioned water supplies provide, on average, considerably more water than will be necessary to meet water demands. This will provide RCWD with the flexibility to choose among water sources in some years.

RCWD will also practice intentional and in-lieu groundwater recharge to arrest the local groundwater overdraft. Currently the lands in Gateway Village are developed for irrigated agriculture, and they get all of their water supplies from groundwater pumping. This has resulted in stress on the local aquifer. Gateway Village has committed to helping RCWD correct the overdraft for the entire Root Creek Water District (estimated to be 3,400 acre-feet), even though Gateway Village will only cover about 15% of the District. Groundwater recharge will generally be higher in wetter years with higher levels of groundwater pumping in dryer years. As a result, the project will balance groundwater supplies on a rolling 5-year average. Various recharge programs will be constructed and ready to implement after full build-out. The programs will have almost twice the available water supply needed to arrest the local groundwater overdraft. This will provide RCWD with the flexibility to select the programs that are the most economical and practical to implement at any given time.

The proposed water sources can offer a firm and reliable supply to RCWD. The anticipated water demand of 6,374 acre-feet per year can be met entirely from the agreement with Westside Mutual Water Company (Westside), which will provide a firm water supply of 7,000 acre-feet/year. Although Westside is only obligated to deliver

water from April to September, RCWD will have the ability to receive and recharge any deliveries that exceed demand during that period, and extract them for later use. In other words, RCWD could provide 100% of the Gateway Village water demands from their agreement with Westside. Therefore, groundwater pumping and surplus water purchases can be viewed as auxiliary water supplies. In reality, to ensure flexibility and economy, RCWD will likely pump some groundwater every year and purchase surplus waters from Madera Irrigation District whenever practical. It should also be noted that demands will effectively be reduced by about 30%, since treated wastewater will be recycled in Gateway Village and used on adjacent farmlands as in-lieu recharge. This reduction in demand was not considered in the discussions above and helps to provide even greater security and reliability for the local water supply.

This Water Supply Assessment concludes that sufficient water supplies will exist to satisfy the projected 20-year demands for the Gateway Village development during normal, single-dry, and multiple-dry years using the assumption that the importation and utilization of surface water is accomplished.

11.2 - Cumulative Impacts

RCWD will have sufficient water supplies available during normal, single, and multiple dry years to meet the demand associated with Gateway Village (based on several water right, transfer, and conveyance agreements). However, RCWD is not in a position to guarantee the sufficiency of water supplies for future developments within the County of Madera that are located outside of the service area boundary for this district. It is RCWD's position that the County of Madera will practice due diligence to ensure that all proposed developments will be required to provide a reliable water source to offset all demands associated with a proposed development. It is also assumed that the County of Madera will actively manage the water resources of all existing communities in and around the RCWD to mitigate any ground water impacts that may be associated with these existing communities.

As a condition of development within the RCWD, Gateway Village has agreed to provide 3,400 acre-feet of water to mitigate the past overdraft condition that has and currently exists over the entire breadth of RCWD. Gateway Village is making this commitment even though the Village will only cover about 15% of RCWD. Therefore, these overdraft reduction measures will benefit the regional area and not just the area proposed for Gateway Village.

In addition to RCWD's proactive stance on groundwater management, this district will also require all developments within their service boundary and any developments that may receive water on a wholesale basis to prove that their development will not exacerbate existing ground water conditions. Any future water users that fail to comply with this condition will not be allowed to develop; however, if the water supply source is adequate to satisfy a portion of the demand associated with a development, only that portion of the project that is covered by the water supply will be allowed to develop.

Water Supply Assessment for Gateway Village Castle and Cooke, Inc.

According to the Madera County Economic Development Commission, regional growth within the County is expected to be 5% on an annual average basis for the next 20 years. However, this rate of growth is more likely to occur within the major urbanized areas within the County, e.g. City of Madera and City of Chowchilla. The unincorporated areas of this County are expected to grow at a slower rate, probably 2 to 3% per annum. Within RCWD, the tentative timeline to reach build-out for Gateway Village is 15 years, once construction has started. The growth rate within RCWD will be governed by housing market conditions – favorable market conditions will increase the growth rate and less than desirable market conditions will decrease the growth rate. At this time, all growth within the RCWD will be attributed to Gateway Village; however, there has been some indication that existing rangeland to the south and southeast may be converted into urban use along with existing developments (only two) expressing interest in connecting to the RCWD water infrastructure system. However, absent an official announcement or approval by the County, these areas are not included in this investigation because they are located outside the boundary of RCWD. If these areas want to connect to RCWD they would be required to comply with the water balance conditions identified previously in this report.

12 - References

California State Senate, *State Senate Bill No 610, Water Supply Assessment*, 2001.

California State Senate, *State Senate Bill No. 221, Water Supply Verification*, 2001.

Hogle-Ireland Associates, Inc., *Gateway Village Area Plan*, 2006.

Hogle-Ireland Associates, Inc., *Gateway Village Specific Plan*, 2006.

Kenneth D. Schmidt and Associates and Provost & Pritchard Engineering Group, Inc., *Hydrogeologic Investigation – Southeastern Madera County*, October 2001.

Kenneth D. Schmidt and Associates and Provost & Pritchard Engineering Group, Inc., *The Village of Gateway – Groundwater Quality Investigation*, August 2004.

Kenneth D. Schmidt and Associates and Provost & Pritchard Engineering Group, Inc., *The Village of Gateway – Groundwater Recharge Investigation*, August 2004.

Provost and Pritchard Engineering Group, Inc., *Gateway Village Infrastructure Master Plan*, 2006.

Provost and Pritchard Engineering Group, Inc., *Gateway Village Report of Waste Discharge*, 2006.

Soil Conservation Service, *Root Creek Watershed Field Review*, 1992.

Appendix A

WATER SUPPLY AGREEMENT

between

ROOT CREEK WATER DISTRICT

and

WESTSIDE MUTUAL WATER COMPANY, LLC

November 1, 2006

WATER SUPPLY AGREEMENT

THIS WATER SUPPLY AGREEMENT is made effective as of November 1, 2006, by and between the ROOT CREEK WATER DISTRICT, a California water district ("RCWD") and WESTSIDE MUTUAL WATER COMPANY, LLC, a California limited liability company ("Westside").

RECITALS:

A. RCWD is a California water district, located in Southeastern Madera County. The lands of the district have been extensively developed to agriculture, and in particular, permanent plantings. Also, a portion of the district has been designated for municipal and industrial development.

B. The lands within RCWD rely primarily on groundwater, and the groundwater basin underlying the district is in a state of overdraft. In order to efficiently manage its groundwater supplies, RCWD is seeking to acquire surface water supplies for conjunctive use purposes.

C. RCWD has acquired or will acquire certain wet-year supplies that it intends to deliver to its agricultural water users. RCWD is also seeking "firm" supplies, available in dry years, that will be available if necessary for the agricultural, municipal and industrial development within the district. Westside desires to provide RCWD with dry-year firm supplies, as described below.

D. Westside and its members have certain rights to banked groundwater in the North Kern Water Storage District ("North Kern") and may bank additional water in North Kern in the future. Westside proposes to pump and deliver banked groundwater to North Kern, for North Kern in turn to deliver to the Shafter Wasco Irrigation District ("SWID"). SWID shall use the banked groundwater delivered from North Kern in lieu of a comparable amount of surface water that SWID would otherwise have taken from the Friant Unit of the Central Valley Project ("Friant"), under its long-term water supply contract with the US Bureau of Reclamation ("Reclamation"). Westside and its members also have access to certain non-project supplies (i.e., waters that are not captured or delivered by Reclamation's Central Valley Project) that Westside may provide to RCWD under this Agreement.

E. The Friant water that could have been delivered to SWID shall remain in Lake Millerton, available for delivery to RCWD through the Madera Canal and related facilities. The parties intend that the SWID water delivered from Lake Millerton to RCWD shall be deemed an exchange for North Kern banked groundwater, and shall not be deemed to be Federal project water when delivered to RCWD.

NOW THEREFORE, in consideration of the mutual covenants and conditions contained in this Agreement, the parties agree as follows:

1. Definitions. Definitions for the following terms are found at the following paragraphs of this Agreement:

- (a) "Approvals" is defined at Paragraph 10.
- (b) "CEQA" is defined at Paragraph 10(b).
- (c) "Commencement Date" is defined at Paragraph 8.
- (d) "Delivered Price" is defined at Paragraph 3(c).
- (e) "Delivery Point" is defined at Paragraph 6.
- (f) "Event of Default" is defined at Paragraph 16.
- (g) "Friant" is defined at Recital D.
- (h) "Force Majeure Event" is defined at Paragraph 14(b).
- (i) "Maximum Delivery Quantity" is defined at Paragraph 2.
- (j) "North Kern" is defined at Recital D.
- (k) "Order" is defined at Paragraph 5.
- (l) "Pre-Delivered Water" is defined at Paragraph 7.
- (m) "Reclamation" is defined at Recital D.
- (n) "Replacement Water Supply" is defined at Paragraph 16.
- (o) "Pre-Delivery Notice" is defined at Paragraph 7.
- (p) "RCWD" is defined in the Preamble.
- (q) "Reservation Fee" is defined at Paragraph 3(a).
- (r) "Standby Charge" is defined at Paragraph 3(b).
- (s) "SWID" is defined at Recital D.
- (t) "Term" is defined at Paragraph 8 .
- (u) "Uncredited Standby Charges" is defined at Paragraph 7(b)(i).
- (v) "Westside" is defined in the Preamble.

2. Agreement to Sell/Right to Purchase. Westside hereby agrees to sell to RCWD banked groundwater or other non-project waters available to Westside each year as requested by RCWD pursuant to the notice procedure set forth below. The amount Westside is obligated to sell each year shall not exceed the "Maximum Delivery Quantity" for that year described in Exhibit "A" to this Agreement and incorporated herein by this reference. RCWD shall not be obligated to purchase water from Westside, except as provided in this Agreement.

3. Pricing.

(a) *Reservation Fee.* Notwithstanding any other provision herein, commencing January 1, 2006 and continuing until the Commencement Date, RCWD shall pay to Westside the sum of \$50,000 each calendar quarter to reserve the availability of water supplies under this Agreement (the "Reservation Fee"). The Reservation Fee shall be paid not later than the 30th day of each calendar quarter.

(b) *Standby Charge.* Beginning on the Commencement Date, RCWD shall pay to Westside an annual "Standby Charge" of \$180 per acre-foot of the Maximum Delivery Quantity available each calendar year, as specified in Exhibit "A" hereto, as adjusted pursuant to this paragraph 3(b) and paragraph 9(b)(ii) hereof. Commencing on the Commencement Date and annually thereafter, the Standby Charge shall be adjusted annually for inflation by the same percentage as the percentage change in the Consumer Price Index for All Urban Consumers, West Region from the value of the Index on January 1, 2006. The annual Standby Charge shall be paid not later than January 31 of each year. Subject to paragraph 7(b)(ii) hereof, all Standby Charges paid shall be credited against the price of water purchased under this Agreement. Any Standby Charges paid that are not credited to water purchased in any year shall roll over into subsequent years until utilized for water purchased. While there shall be no limit to the amount of credit RCWD can accrue for Standby Charges paid, RCWD shall not be entitled to exceed the Maximum Delivery Quantity of water available in any year. If at the end of the Term there is a credit remaining, then RCWD shall be entitled to order and delivery, and be subject to pre-delivery, of the amount of water that can be purchased with such credit pursuant to the provisions of this Agreement.

(c) *Water Charge.* The price of water delivered under this Agreement shall be \$600 per acre-foot (the "Delivered Price") as adjusted pursuant to this paragraph 3(c) and paragraph 9(b)(ii) hereof. Commencing on the Commencement Date and annually thereafter, the Delivered Price shall be adjusted annually for inflation by the same percentage as the percentage change in the Consumer Price Index for All Urban Consumers, West Region from the value of the Index on January 1, 2006.

4. Payment of Delivered Price. RCWD shall pay the Delivered Price for all water ordered within 60 days of the Order for such water. Standby Charges paid shall be credited against the Delivered Price pursuant to paragraph 3(b) hereof.

5. Ordering. Not later than April 1 of each calendar year, RCWD shall give written notice to Westside of the amounts of water to be purchased that year (the "Order"), up to the Maximum Delivery Quantity for that year. At RCWD's option, RCWD may also include in the Order a monthly schedule of requested deliveries as well as the total for the year and Westside shall use its reasonable good faith efforts to comply with the requested delivery schedule. In no case shall Westside be obligated to deliver more than 13.5 percent of the Maximum Delivery Quantity for that year in any single month; provided, however, that Westside shall remain obligated to deliver the full Maximum Delivery Quantity.

6. Delivery. The delivery point for all water ordered under this Agreement shall be RCWD's turnout on Madera Irrigation District Lateral 6.2 from the Madera Canal (the "Delivery Point"). The delivery period for all water ordered shall be April through September. Westside shall not be obligated to deliver any water during the period October through March; provided, however that Westside may pre-deliver water at any time during the year pursuant to paragraph 7 hereof regarding Pre-Delivery.

(a) *Conveyance to Delivery Point.* Except as provided in this Agreement, Westside shall be solely responsible for conveyance arrangements necessary to deliver the water to the Delivery Point, including, but not limited to, contracting with other parties for water exchanges.

(b) *Losses.* Westside shall be responsible to deliver the full amount of water specified in the Order to the Delivery Point and shall have no responsibility for any losses of any kind after its delivery of water to the Delivery Point. RCWD shall be solely responsible for any losses, including carriage or conveyance losses, after the Delivery Point.

7. Pre-Delivery. Westside may, at its option, deliver water at any time during the year to RCWD prior to receipt of an Order for such water ("Pre-Delivered Water"), provided that RCWD has available conveyance capacity and beneficial use (including capacity for direct recharge) for such water. Westside shall notify RCWD in writing when and if Westside has water available for pre-delivery ("Pre-Delivery Notice"). The Pre-Delivery Notice shall specify the amount of water available to be pre-delivered and the proposed timing of delivery. Not later than ten (10) days following receipt of the Pre-Delivery Notice, RCWD shall notify Westside how much, if any, Pre-Delivered Water that RCWD has the conveyance capacity and beneficial use to receive over and above that dedicated to receiving Section 215 water available to RCWD as a Section 215 contractor with the Bureau of Reclamation and/or water available under its agreement with Madera Irrigation District dated March 13, 2002 as it exists on the date hereof. RCWD shall maintain during the Term sufficient beneficial use and conveyance capacity in its water delivery facilities to allow (a) total deliveries of at least 10,000 AF of water each calendar year and (b) deliveries by Westside of at least 4,000

AF of water each calendar year. If this obligation is not satisfied at any time during the Term, then Westside shall have first priority to use RCWD delivery facilities for Pre-Delivered Water until the quantity of water prevented from being delivered by such limitation is delivered by Westside.

(a) *Application to Orders (Delivery).* Water Orders made by RCWD shall be considered satisfied first from the amount of Pre-Delivered Water delivered to the Delivery Point. RCWD shall not be considered to have ordered Pre-Delivered Water until Westside receives an Order.

(b) *Application of Uncredited Standby Charges.* If, as of December 31 of any year:

(i) RCWD has Pre-Delivered Water remaining, and after crediting the Standby Charges paid by RCWD against all water ordered by and delivered to RCWD prior to December 31 of that year RCWD still has a credit for additional Standby Charges (“Uncredited Standby Charges”), then

(ii) RCWD shall be deemed to have ordered an amount of the remaining Pre-Delivered Water up to the lesser of the amount of remaining Pre-Delivered Water or the amount that could be purchased for the amount of the Uncredited Standby Charges. The appropriate amount of Pre-Delivered Water shall be deemed delivered and paid for by crediting the appropriate amount of Standby Charges as of December 31 of that year. At the end of the Term, RCWD shall pay for any Pre-Delivered Water remaining after the foregoing credit at the then existing Delivered Price.

(c) *Reporting.* To monitor RCWD’s use of Pre-Delivered Water, RCWD shall deliver to Westside a copy of RCWD’s annual report submitted to Madera County, the Madera Irrigation District and/or the Friant Water Users’ Authority (or its successor under the December 31, 1999 contract with RCWD) at the time of such submission demonstrating RCWD’s water deliveries utilized for elimination of the contribution of its lands to regional overdraft. Should RCWD report the use of any Pre-Delivered Water, or other water from Westside that RCWD has not paid for, in achieving RCWD’s groundwater balance, then RCWD shall promptly pay Westside for the reported water.

8. Term. The initial term of this Agreement shall be for a period of twenty-five (25) years, commencing on the “Commencement Date,” which shall be January 1, 2008, or, if the General Plan Amendment, Area Plan Amendment and Specific Plan Amendment for Gateway Village are not approved by June 30, 2007, January 1, 2009, unless otherwise mutually agreed by RCWD, Westside, North Kern and SWID.

9. Renewal.

(a) *Renewal.* Subject to the renewal provisions described below, RCWD may, at its option, renew this Agreement on the same terms and conditions for up to one (1) additional twenty-five (25) year period. Each twenty-five (25) year period is referred to herein as a "Term". RCWD shall provide written notice to Westside of its intent to renew not later than one (1) year prior to the expiration of the initial Term.

(b) *Renewal Provisions.*

(i) Notwithstanding paragraph 6(a) hereof, RCWD and Westside shall, upon delivery to Westside of RCWD's notice of intent to renew this Agreement pursuant to paragraph 9(a) hereof, be mutually obligated to secure the conveyance arrangements necessary to deliver water under this Agreement to the Delivery Point for any renewal Term. In the event that such arrangements cannot reasonably be secured prior to the expiration of the initial term despite the good faith efforts of both parties, then this Agreement shall not be renewed.

(ii) At the beginning of the renewal Term, the Delivered Price and the Standby Charge shall be adjusted to an amount that reflects the then-current market price for water supplies of similar origin and reliability delivered to the Delivery Point. In the event that the parties are unable to agree as to a then-current market price, such price shall be decided through the dispute resolution procedure described in Paragraph 18 below.

10. Governmental Approvals and Environmental Review.

(a) *Governmental Approvals.* The parties shall work together to obtain any approvals or consents necessary from any governmental agency for the transactions contemplated herein ("Approvals"). Notwithstanding the foregoing,

(i) RCWD shall be solely responsible for any costs or fees incurred for any Approvals, except as provided in this Agreement.

(ii) Westside shall be solely responsible to negotiate with and obtain any necessary Approvals from North Kern and SWID.

(b) *CEQA.* The parties acknowledge that RCWD, North Kern and SWID are responsible to comply with the provisions of the California Environmental Quality Act ("CEQA") in connection with the performance of the actions contemplated by this Agreement. For CEQA purposes, RCWD shall be the lead agency, and North Kern and SWID shall be responsible agencies. RCWD shall bear all costs for CEQA compliance.

11. Conditions Precedent. The following are conditions precedent to the parties' performance under this Agreement except for RCWD's unconditional obligation to pay the Reservation Fee which shall be absolute:

(a) Westside and North Kern shall have executed the agreements necessary for Westside's performance under this Agreement; provided, however, that execution of such agreements shall be within the sole and absolute discretion of Westside. If this condition precedent is not satisfied, then Westside shall refund to RCWD one-half of the Reservation Fee paid to that date and this Agreement shall terminate.

(b) Westside and SWID (or at Westside's discretion Westside and another Friant Contractor) shall have executed the agreements necessary for Westside's performance under this Agreement; provided, however, that execution of such agreements shall be within the sole and absolute discretion of Westside. If this condition precedent is not satisfied, then Westside shall refund to RCWD one-half of the Reservation Fee paid to that date and this Agreement shall terminate.

(c) RCWD, North Kern and SWID shall have completed their environmental review as required by CEQA for the actions contemplated by this Agreement, and the time period to appeal the approval by any of those agencies of any CEQA document shall have run.

(d) The parties shall receive written confirmation from Reclamation that:

(i) RCWD is within the municipal and industrial "place of use" designated in Reclamation's permits from the State Water Resources Control Board for waters delivered from Friant; and that

(ii) SWID Friant water exchanged for North Kern banked groundwater shall be considered "non-project" water when delivered to RCWD.

(e) The parties have received all necessary Approvals.

12. Westside Representations and Warranties. Westside represents and warrants to RCWD that, to the best of Westside's knowledge:

(a) Westside is a limited liability company duly organized, validly existing and in good standing under the laws of the State of California;

(b) As of the date of this Agreement, Westside and its members have banked groundwater within North Kern on their own account(s) and have the current right to withdraw and transfer about 30,000 acre feet of that stored water. Westside and its members also have the right to bank additional water and have other water banked within Kern County that,

based on circumstances, laws, rules and regulations that exist as of the date of this Agreement, will allow Westside to fulfill its obligations under this Agreement throughout the total 50 year term if the option to renew is exercised.

(c) Westside has all necessary power and authority to enter into this Agreement and to perform its obligations hereunder; and all actions required to be taken on its part to approve the execution and delivery of this Agreement have been duly taken. This Agreement constitutes a legal, valid and binding obligation of Westside, enforceable against Westside in accordance with its terms.

(d) The execution and delivery of this Agreement by Westside, and the performance of its obligations hereunder do not and will not (i) violate, or conflict with its obligations under any contract to which it is a party or by which it is bound, or (ii) violate (and none of such obligations is void or voidable under) any law, regulation, order, arbitration award, judgment or decree to which it is a party or to which it is subject.

(e) Subject to paragraphs 10 and 11 hereof, no authorization, consent or approval of, or notice to, any person or entity (including but not limited to any federal, state, county, local or foreign government, regulatory body or official or any third party) not already obtained or given by Westside is required to be obtained or given in connection with the execution and delivery of this Agreement by Westside or the performance of any of its obligations hereunder.

(f) Subject to paragraphs 9, 10, 11 and 14 hereof, Westside currently has and will maintain throughout the Term, as extended, the legal right and ability to perform all of its obligations under this Agreement, including, but not limited to, the conveyance arrangements necessary to deliver the water to the Delivery Point.

(g) As of the date of this Agreement, there is no suit, action, arbitration, or legal, administrative, or other proceeding, or governmental investigation pending or threatened affecting any of the transactions contemplated by this Agreement.

13. RCWD Representations and Warranties. RCWD represents and warrants to Westside that, to the best of RCWD's knowledge:

(a) RCWD is a California water district duly formed and organized under the California Water District Law; RCWD has all necessary power and authority to enter into this Agreement and to perform its obligations hereunder; and all action required to be taken on its part to approve the execution and delivery of this Agreement has been duly taken.

(b) The execution and delivery of this Agreement by RCWD, and the performance of its obligations hereunder, do not and will not (i) violate, or conflict with its obligations under, any contract to which it is a party or by which it is bound, or (ii) violate (and none of such obligations is void or voidable under) any law, regulation, order, arbitration award, judgment or decree to which it is a party or to which it is subject.

(c) As of the date of this Agreement, there is no suit, action, arbitration, or legal, administrative, or other proceeding, or governmental investigation pending or threatened affecting any the transactions contemplated by this Water Service Agreement.

(d) This Agreement constitutes the legal, valid and binding obligation of RCWD, enforceable against RCWD in accordance with its terms.

14. Force Majeure/Permitted Suspension of Performance.

(a) *Suspension of Water Delivery.* Westside may suspend its delivery obligations under this Agreement only if it is unable to substantially perform such delivery obligations as the result of a Force Majeure Event (defined below); provided, however, that no suspension shall extend the Term of this Agreement. If at all possible, prior to suspension of performance, and in no event less than two business days following suspension of performance of water delivery based on a Force Majeure Event, Westside shall provide RCWD with written notice of the estimated duration for the suspension and the basis for the suspension. Westside shall additionally provide RCWD with any information that Westside subsequently obtains regarding the Force Majeure Event and any information RCWD may reasonably request. Except as expressly provided in this Paragraph or as a remedy for a default of the other party, neither party shall be entitled to suspend, or otherwise be excused from, performance of any of its obligations under this Agreement.

(b) *Force Majeure Event.* A "Force Majeure Event" is strictly limited to the following:

Any flood, earthquake, failure of any facility not owned by Westside, acts of God (other than drought), governmental or court actions, Reclamation allocations and other events which are beyond the reasonable control of, and have not been caused or contributed to by Westside and whose consequences cannot be avoided by utilizing other water supplies or conveyance facilities reasonably available to Westside at an equivalent cost. Neither drought nor unavailability of water resulting from drought shall result in cancellation or permanent reduction of water available under this contract.

(c) *Make-up Water.* Should Westside be unable to deliver the full amount of water ordered by RCWD in any year due to a Force Majeure Event, RCWD shall have the option of obtaining water in the following five (5) years pursuant to the provisions of this Agreement, including paragraph 2 hereof, to make up that shortfall if necessary to meet RCWD's obligations to balance the water usage in RCWD.

15. Events of Default. An "Event of Default" of a party shall be deemed to occur if, unless excused by a Force Majeure Event, the party at any time fails to perform any of its obligations as and when required to be performed under this Agreement, or any representation or warranty of the party made or restated in this Agreement becomes false or inaccurate in any material respect at any time; provided, however, that the other party shall have first demanded in writing that the party cure such non-performance, or false or inaccurate representation or warranty (or cause it to be cured) and the party shall have then failed to (i) cure the default within 30 days after the receipt of such demand in the case of payment obligations, (ii) commence a cure within 30 days after the receipt of such demand in the case of non-payment performance obligations, or (iii) develop within 30 days after the receipt of such demand and thereafter perform a plan to maintain RCWD's five year rolling average groundwater balance in the case of Westside's obligation to deliver water.

16. Rights Upon an Event Default. Upon the occurrence of an Event of Default, the non-defaulting party (a) may suspend performance of its obligations under this Agreement until the Event of Default has been cured or waived, and (b) shall have the following rights and remedies:

(i) *Westside Event of Default.*

Replacement Water Supply

Upon a Westside Event of Default, RCWD shall immediately have the right to (A) specific performance of Westside's obligations under this Agreement and (B) reimbursement of the actually incurred reasonable cost of obtaining water to replace the water requested in an Order that Westside does not deliver ("Replacement Water Supply") less all amounts saved as a result of the Event of Default including all amounts that otherwise would have been due under this Agreement.

Termination of Contract and Replacement Contract

RCWD shall have the right to terminate this Agreement upon its reasonable determination that a material Westside Event of Default has occurred that cannot or will not be cured within a reasonable time. Westside's obligation to reimburse RCWD for a Replacement Water Supply shall thereupon cease and RCWD shall have the right to recover from Westside, immediately upon demand, an amount equal to the excess of (A) the net present value as of the termination date of the reasonable cost of securing equivalent substitute performance from a financially responsible contractor for the balance of the existing Term remaining as of the date of termination, over (B) the net

present value as of the date of termination of all amounts RCWD saved as a result of such termination plus the cost of any water under a Replacement Water Supply to be delivered after the date of termination for which Westside has paid reimbursement.

Sole Remedy

The rights and remedies of RCWD described in this paragraph 16 are RCWD's sole and exclusive remedy for any Event of Default by Westside under, or any inaccuracy in any of Westside's representations and warranties in, this Agreement.

(ii) *RCWD Event of Default.* Upon a RCWD Event of Default, Westside shall immediately have the right to (A) deem any Pre-Delivered Water as ordered to accelerate delivery of any Pre-Delivered Water and payment therefor, (B) specific performance of this Agreement or money damages at the discretion of Westside, (C) payment of any amount that is due and payable by RCWD under this Agreement plus interest at the rate of 10 percent per annum, and/or (D) terminate this Agreement; provided, however, that no delay in termination of this Agreement by Westside shall constitute a waiver of this right. RCWD's obligation to pay any amounts that are due and payable under this Agreement or this paragraph 16 shall survive any termination of this Agreement. The rights and remedies of Westside described in this paragraph 16 shall be cumulative, and are Westside's sole and exclusive remedies for any Event of Default by RCWD under, or any inaccuracy in any of RCWD's representations or warranties in, this Agreement.

17. Dispute Resolution. Upon the request of either party, any dispute claim, or controversy of any kind arising in connection with this Agreement shall be resolved through a two-step dispute resolution process, as follows:

(a) *Step I Mediation:* At the request of either party, the dispute, claim or controversy of the matter shall be referred for mediation to a retired Superior Court Judge, reasonably acceptable to both parties.

(b) *Step II Trial by Court Reference:* If the dispute, claim or controversy has not been resolved by Step I mediation, then any remaining dispute, claim or controversy shall be submitted for determination by a trial on Order of Reference conducted by a single retired Judge appointed pursuant to the provisions of California Code of Civil Procedure Section 638 (or any amendment, addition or successor section thereto). **BOTH PARTIES HEREBY WAIVE A JURY TRIAL OR PROCEEDING IN CONNECTION WITH ANY DISPUTE, CLAIM OR CONTROVERSY ARISING IN CONNECTION WITH THIS AGREEMENT.** The parties intend this general reference agreement to be specifically enforceable in accordance with CCP Section 638, and no other agreement shall be necessary to submit a dispute to general judicial reference.

(i) The general reference proceeding shall be commenced by a request or motion filed with the Presiding Judge of the

Superior Court of Kings County. If the parties are unable to agree upon a person to act as referee, then a referee shall be appointed by the Presiding Judge as provided under CCP Section 640.

(ii) The parties shall pay in advance, to the referee, the estimated reasonable fees and costs of the reference. Each party shall be responsible for one-half of such estimated fees. The referee shall be authorized to award costs of the general reference, including, without limitation, attorneys' fees, expert witness fees and fees assessed by the referee to the prevailing party.

(iii) The general reference hearing must commence within three (3) months after appointment of the referee. The referee shall report his or her findings to the Court in the form of a statement of decision within twenty (20) days after the close of testimony, pursuant to CCP Section 643. The Court shall enter judgment based upon the statement of decision which shall be appealable.

(c) *Venue.* The parties agree that venue for any mediation or reference held pursuant to this Paragraph shall be the County of Kings, to avoid any undue advantage that might otherwise accrue to RCWD or Westside from a venue located in their respective home counties.

18. Indemnification. Neither party shall be liable for injury or damage to persons or property caused by the other party, or the other party's employees, agents, or representatives. Each party hereby agrees to defend, indemnify, and hold harmless the other party from any claim, demand, or liability on account of such injury or damage.

19. Severability. If any term or provision of this Agreement shall be held to be invalid or unenforceable in any jurisdiction, for any reason, then it is the intention of the parties that this Agreement shall be construed and enforced as if such invalid or unenforceable term or provision had never been a part hereof without invalidating the remaining terms and provisions hereof, and that all of the terms and provisions of this Agreement shall remain in full force and effect without regard to such invalidity or unenforceability.

20. Waiver. The failure by either party to enforce any of the covenants, terms, or conditions of this Agreement shall not be deemed a waiver of such breach, or any future breach, of such covenants, terms, or conditions, unless such waiver shall have been made in writing.

21. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the, successors, and permitted assignees of the parties.

22. Assignment. Except as provided in this Paragraph, neither party shall assign or transfer its rights under this Agreement. RCWD hereby consents to an assignment of the rights and delegation of the obligations of Westside pursuant to this Agreement to a trust or foundation for estate planning purposes, an affiliate entity, North

Kern or SWID. Upon the prior written consent of Westside, which shall not be unreasonably withheld, RCWD may assign its rights to receive water under this Agreement provided that RCWD shall pay all of the costs of environmental review or third party permitting necessary to accomplish the assignment and pay any additional conveyance costs (including, but not limited to conveyance losses) to any alternate point of delivery.

23. Governing Law. This Agreement shall be governed by, and construed and enforced in accordance with the laws of the State of California.

24. Further Assurances. From time to time and at any time after the execution and delivery hereof, each of the parties, at their own expense, shall execute, acknowledge and deliver any further instruments, documents and other assurances reasonably requested by the other party, and shall take any other action consistent with the terms of this Agreement that may reasonably be requested by another party, to evidence or carry out the intent of this Agreement.

25. Notices. All notices and other communications required under this Agreement shall be in writing and shall be deemed to have been duly given (i) on the date of service, if served personally on the person to whom notice is to be given, (ii) on the date of service if sent by e-mail or telecopier, provided the originally is concurrently sent by first class mail, and provided that notices received by email or telecopier after 5:00 p.m. shall be deemed given on the next business day, (iii) on the next business day after deposit with a recognized overnight delivery service, or (iv) on the third (3rd) day after mailing, if mailed to the party to whom notice is to be given by first class mail, registered or certified, postage-prepaid, and properly addressed as follows:

To Westside: William D. Phillimore, Executive Vice President
Westside Mutual Water Company
33141 E. Lerdo Highway
Bakersfield, California 93308-9767

With a copy to:
Roll International Corporation
Attn: General Counsel
11444 W. Olympic Blvd., 10th Floor
Los Angeles, CA 90064

To RCWD: Philip R. Pierre, President
c/o Christopher L. Campbell, Esq.
Baker, Manock & Jensen
5260 N. Palm Avenue, Suite 421
Fresno, California 93701

or at such other address as any party may, by like notice, designate to the other party in writing.

26. Liquidated Damages. It is not intended that this Agreement contain any provisions providing for liquidated damages. However, in the event that any provision of this Agreement should nevertheless be construed as providing for liquidated damages, then the parties agree that provision is reasonable under the circumstances existing at the time this Agreement is made.

27. References. The Paragraph headings in this Agreement are provided for convenience only, and shall not be considered in the interpretation hereof or thereof. References in this Agreement to Paragraphs refer, unless otherwise specified, to the designated Paragraph of this Agreement. Terms such as "herein," "hereto" and "hereof" refer to this Agreement as a whole.

28. Counterparts. This Agreement may be executed in any number of counterparts, each of which shall be deemed to be an original instrument, but all of which together shall constitute one and the same instrument.

29. Entire Agreement. This Agreement constitutes the entire agreement between the parties hereto with respect to the subject matter hereof, and supersedes all prior agreements or understandings with respect thereto. This Agreement may be modified or amended only by written instrument signed by both parties.

30. Time and Computation of Time. Time is of the essence of this Agreement and each and all of its provisions. The parties agree that the time for performance of any action permitted or required under this Agreement shall be computed as if such action were "an act provided by law" within the meaning of California Civil Code §10, which provides: "The time in which any act provided by law to be done is computed by excluding the first day and including the last, unless the last day is a holiday, and then it is also excluded."

31. Parties in Interest. Nothing in this Agreement, whether expressed or implied, is intended to confer any rights or remedies on any persons other than the parties hereto and their respective successors and assigns, nor is anything in this Agreement intended to relieve or discharge the obligation or liability of any third person to any party to this Agreement, nor shall any provision give any third person any right of subrogation or action over and against any party to this Agreement.

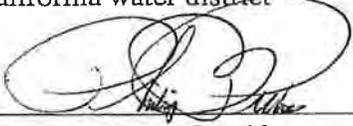
IN WITNESS WHEREOF, the parties have executed this Agreement to be effective as of the date first above written.

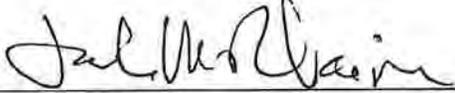
“RCWD”

“Westside”

ROOT CREEK WATER DISTRICT,
a California water district

WESTSIDE MUTUAL WATER COMPANY LLC,
a California limited liability company

By 
Philip R. Pierre, President

By 
Joseph C. MacIlvaine, President

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Exhibit "A"
Maximum Delivery Quantities and Standby Charges

Period after Commencement Date	Maximum Delivery Quantity
Years 1-4	3,500 af/year
Years 5-9	5,000 af/year
Years 10+	7,000 af/year

Appendix B

EASEMENT AND ANNEXATION AGREEMENT

THIS EASEMENT AND ANNEXATION AGREEMENT is made effective as of February 16, 2006, by and between CONSOLIDATED LAND COMPANY, a California limited partnership ("Consolidated"), the ROOT CREEK WATER DISTRICT, a California water district ("RCWD"), and the MADERA IRRIGATION DISTRICT, a California irrigation district ("MID"). RCWD and MID are referred to below together as the "Districts".

RECITALS:

A. Consolidated is the owner of that certain real property, commonly known and referred to as River Hills Ranch, more particularly described in Exhibit "1" hereto, incorporated herein by this reference (the "Property"). The Property lies generally between the MID Lateral 6.2 and the boundary of RCWD, but is not currently part of RCWD or MID.

B. RCWD has acquired capacity in, and the right to wheel surface water through, the Madera Canal and MID Lateral 6.2. RCWD desires to establish a pipeline connection between MID Lateral 6.2 and the RCWD service area. RCWD desires to obtain a pipeline easement over the Property, as described in this Agreement.

C. MID currently holds an easement over the Property, as described in that certain Easement Grant, recorded in the Official Records of Madera County on November 27, 1984, in Book 919, Page 494 (the "Existing MID Easement"). Consolidated desires that the pipeline currently located in the Existing MID Easement (the "Existing MID Pipeline") be relocated to the easement to be created under this Agreement, and for MID to then abandon the existing easement. MID is willing to allow RCWD to relocate the Existing MID Pipeline, at RCWD's cost and expense, and then to abandon the Existing MID Easement.

D. Consolidated desires to obtain the conditional pre-approval of RCWD for the annexation of the Property to the RCWD service area, on the terms and subject to the conditions of this Agreement.

NOW THEREFORE, for valuable consideration, the receipt of which is hereby acknowledged:

1. Grant of Easement.

(a) Consolidated hereby grants to RCWD a perpetual underground pipeline easement (the "Easement") over that portion of the Property described in Exhibit "2" hereto, incorporated herein by this reference, to construct, install, operate, maintain, repair, and reconstruct one ___ inch diameter underground pipeline and all associated appurtenances and fixtures (the "RCWD Pipeline") sufficient in design and capacity to deliver all of RCWD's current and future surface water requirements, and to flow and conduct water through said RCWD Pipeline, together with all rights necessary, convenient, or incidental thereto.

(b) Consolidated hereby grants to MID a perpetual underground pipeline easement (also the "Easement") over that portion of the Property described in Exhibit "2" hereto, to construct, install, operate, maintain, repair, and reconstruct one ___ inch diameter underground pipeline and all associated appurtenances and fixtures (the "New MID Pipeline") sufficient in design and capacity to deliver all of MID's surface water irrigation requirements necessary to serve only that portion of the MID service area served by the Existing Pipeline, and to flow and conduct water through said New MID Pipeline, together with all rights necessary, convenient, or incidental thereto.

(c) RCWD and MID shall jointly hold exclusive and first priority rights to the Easement. The allocation of use of the RCWD Pipeline and New MID

Pipeline shall be of no concern to Consolidated. The Districts shall exercise the rights herein granted in such manner as not to cause an unreasonable interference with or destruction of the existing vineyard operation or any lawful future use of the remainder of the Property by Consolidated. Except as expressly provided herein, RCWD shall be responsible to repair or reimburse Consolidated for any damage to the Property located within the Easement area caused by the construction and placement of the RCWD Pipeline or the New MID Pipeline. Neither RCWD nor MID shall be responsible for the cost or replacement of any vines that must be permanently removed to locate the Easement and the RCWD Pipeline or the New MID Pipeline within the Road 40 alignment along the western boundary of Section 29, Township 11 South, Range 20 East, Mount Diablo Base and Meridian.

2. Use by Consolidated. Consolidated may use the area subject to the Easement in any lawful manner not inconsistent with the rights herein granted to the Districts, including development of the Property to municipal or industrial uses, provided that Consolidated shall not place any form of structure, any personal property, or any trees, plants, or shrubs in the area subject to the Easement without the express prior written consent of the Districts, which will not be unreasonably withheld, delayed or conditioned.

3. New MID Pipeline; Abandonment of Existing MID Pipeline. RCWD shall construct, at its expense, the New MID Pipeline. The New MID Pipeline shall meet MID's standards for similar facilities in effect as of the date of this Agreement. MID shall be responsible for all operations, maintenance, and replacement costs for the New MID Pipeline. Upon completion of the New MID Pipeline, MID shall abandon the Existing MID Easement and the Existing MID Pipeline and MID shall quitclaim its interest in the Existing MID Easement and the Existing MID Pipeline to Consolidated. Consolidated shall bear, and shall relieve MID from, all expense of removal of the Existing MID Pipeline, at such time as Consolidated, in its discretion, deems appropriate.

4. RCWD Annexation.

(a) At such time as Consolidated determines, in its sole discretion, to pursue annexation of the Property to RCWD, then, as consideration for granting the Easement, subject to compliance with applicable environmental laws, RCWD hereby agrees that it shall approve such annexation, on the terms and subject to the conditions of this Agreement.

(b) RCWD shall support the annexation of the Property and cooperate with Consolidated to obtain the approval by the Local Area Formation Commission ("LAFCO") and any other agencies maintaining jurisdiction or involvement in the annexation process. However, Consolidated shall be responsible to obtain any necessary approvals and entitlements for Consolidated's annexation of the Property to RCWD from any other agency other than RCWD having jurisdiction over such entitlements and annexation (an "Agency"), including approval of the annexation from LAFCO. RCWD shall provide such assistance and support to Consolidated to obtain such approvals as may reasonably be provided by an annexing public agency to a landowner seeking annexation. Notwithstanding the foregoing, Consolidated will be responsible for all costs and expenses in connection with annexation to RCWD, including, but not limited to any environmental consultation or compliance fees or costs. If and when Consolidated elects to pursue municipal and industrial development on the Property, Consolidated shall be responsible to obtain any necessary approvals and entitlements required for Consolidated's development of the Property to municipal and industrial uses. Upon request by Consolidated, RCWD shall cooperate and assist Consolidated in obtaining the necessary approvals and entitlements, but only to the extent that RCWD, as a public agency, deems such cooperation and assistance appropriate.

(c) If and when RCWD annexes the Property and Consolidated provides water to RCWD for municipal and industrial uses as required by Paragraph 5 below, RCWD shall provide water service and any other RCWD utility services to the Property in accordance with RCWD's then-current policies, connection fees and rate

schedules. The Property shall be entitled to receive municipal and industrial water service and other RCWD utility services on the same priority basis as other lands within the district, i.e., the Property's right to receive such services shall not be considered subordinate to the rights of other lands already within RCWD.

(d) The parties acknowledge that the Property will rely on groundwater extracted from wells located on the Property to meet all projected agricultural requirements, and therefore the Property shall not, as a result of annexation, be entitled to delivery of agricultural irrigation water from RCWD. The property shall be subject to any charges that RCWD assesses against all lands within its service area regardless of whether such lands directly receive services; at the date of this Agreement, the amount of such charges is \$3.00 per acre per year, subject to change in accordance with law. (The Property shall not be subject to charges relating to municipal and industrial water service or other RCWD utility services until the Property is developed for municipal and industrial uses and such services are provided to the Property).

(e) Consolidated shall be responsible for any costs associated with providing water and utility services to the Property, including, but not limited to, the Property's proportionate share of the capital costs for any facilities that directly benefit the Property; the Property's proportionate share of RCWD operations and maintenance costs; and the Property's proportionate share of past and current RCWD infrastructure costs and other costs proportionately assessed to all utility users with RCWD, such as wheeling capacity fees for MID Lateral 6.2.

(f) Without limiting the foregoing, upon annexation the Property shall become subject in the same manner as other lands in RCWD to all of the terms and provisions of the "Agreement Concerning Agricultural, Municipal and Industrial Water Use Within Root Creek Water District" executed on December 30, 1999, and the "Agreement between Madera Irrigation District and Root Creek Water District for the Conveyance and Sale of Water" executed on March 13, 2002.

5. Annexation Supplies and Capacity. If and when the Property is annexed to RCWD:

(a) In accordance with the policies of RCWD and Madera County, as a condition of receiving municipal and industrial water service, Consolidated shall be required to provide to RCWD sufficient imported surface water supplies and any conveyance capacity or exchange agreements necessary to deliver the water to RCWD to meet the projected water demand for the municipal and industrial development approved for the Property ("Consolidated Supply and Capacity"). Consolidated's obligation to provide imported surface water supplies for the municipal and industrial development approved for the Property shall be net of such groundwater supplies from the Property as may be approved by Madera County as available for use for such development of the Property. For purposes of this Agreement, Consolidated shall be deemed to have provided imported surface water to RCWD if such imported surface water is delivered to an RCWD turnout on MID Lateral 6.2.

(b) Consolidated may inquire of RCWD as to whether RCWD has any Incremental Water Supplies and Capacity available, as defined below.

(i) "Incremental Water Supplies and Capacity" shall mean supplies and delivery capacity in excess of (A) RCWD's contracted-for supplies and delivery capacity existing as of the date of this Agreement, required for the current agricultural uses within RCWD and the projected M&I uses of the Village of Gateway development at build-out, and (B) such additional supplies and delivery capacity as may be necessary for the Village of Gateway to obtain final approvals from the County of Madera.

(ii) If RCWD has available Incremental Supplies and Capacity, such supplies and capacity shall be credited toward any required Consolidated Supply and Capacity ("Dedicated Incremental Supplies and Capacity"). Any

Dedicated Incremental Supplies and Capacity shall be owned and managed by RCWD, but held for the benefit of the Property.

(iii) Consolidated shall be responsible to reimburse RCWD for (A) RCWD's costs in acquiring the Dedicated Incremental Supplies and Capacity (or the prorated share of such costs where such supplies and capacity are a portion of a larger acquisition by RCWD) and (B) any continuing costs attributable to the Dedicated Incremental Supplies and Capacity.

(c) Upon request of Consolidated at any time after the annexation of the Property to RCWD, RCWD agrees to use its best efforts to identify and acquire surface water supplies and conveyance capacity, and to otherwise assist Consolidated in acquiring any required Consolidated Supplies and Capacity, at Consolidated's sole cost and expense. If Consolidated elects to acquire such supplies and capacity, Consolidated shall reimburse RCWD for all costs incurred in acquiring such supplies and capacity. As part of its efforts under this paragraph, RCWD may, in its sole and absolute discretion, offer to Consolidated the opportunity to participate in RCWD's own purchases of supplies and/or delivery capacity ("Participation Supplies and Capacity"). RCWD shall notify Consolidated in writing of RCWD's opportunity to acquire Participation Supplies and Capacity for Consolidated's benefit, and of all material terms of such acquisition. Consolidated shall respond in writing within 15 business days, indicating whether or not Consolidated desires RCWD to acquire the Participation Supplies and Capacity on the terms stated in the notice.

(d) In the event that RCWD acquires particular water supplies and/or capacity on behalf of less than all of its landowners ("Subscription Supplies and Capacity"), RCWD shall, to the extent reasonably possible, offer to Consolidated the opportunity to participate in the acquisition of such supplies and capacity. Consolidated acknowledges that (i) such opportunity may be conditioned on the consent of other participating landowners, and (ii) Consolidated's portion of any Subscription Supplies and Capacity may be subject to terms and conditions not applicable to the other

landowners if the Property has not been annexed to RCWD at the time such supplies are acquired.

(e) The parties anticipate that additional infrastructure, including pipeline and turnouts, will be constructed to serve the Property. RCWD will work with Consolidated to form an improvement district or similar entity to allow the construction of such infrastructure to be financed by the sale of public bonds.

6. Other Municipal Services. RCWD will provide water, stormwater and wastewater services to the Gateway Village development. The parties acknowledge that another local government agency will likely be formed in the future as necessary to provide police, fire, street lighting, parks, and other municipal services that cannot be provided by RCWD (the "Services District"). RCWD intends to contract with the Services District to provide common management and administrative services where possible. RCWD agrees to use its best efforts to cause the Property to also be included within the Services District.

7. Term of Annexation Rights. Consolidated shall have a period of fifteen (15) years from the "Commencement Date" to pursue annexation of the Property to RCWD as outlined in Paragraph 4 (the "Term"). The "Commencement Date" shall be the later of (i) the date that the last appeals period runs in connection with the County of Madera's approval of the Village of Gateway Specific Plan, provided that no appeal is filed, or (ii) the date of a final resolution of any such appeal in such a manner that the Village of Gateway development is permitted to proceed, and the project proponent in fact determines to proceed on the basis of such resolution.

8. Damages for Failure to Annex.

(a) If, during the Term, (i) Consolidated does not request to annex the Property to RCWD, or (ii) despite RCWD's compliance with the terms of this Agreement, any Agency denies Consolidated's application for such annexation and

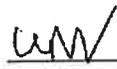
Consolidated chooses to abandon its efforts to appeal such denial or has exhausted all of its appeal rights, then Consolidated may request the payment specified in Paragraph (b) below upon sixty (60) days' written notice to RCWD.

(b) If the conditions of Paragraph 8(a) are satisfied RCWD shall pay to Consolidated the cash sum of One-Half Dollar (\$.50) per square foot of the Easement area, adjusted to the time of payment by the change from the January 2004 level of the Consumer Price Index, All Urban Consumers in Western Cities Less than 500,000 or the comparable successor index most reflective of the western United States economy outside the major urban centers. Following payment, RCWD shall have no further obligation to annex the Property pursuant to this Agreement. RCWD AND CONSOLIDATED EACH AGREE THAT IF, FOR ANY REASON WHATSOEVER, THE PROPERTY IS NOT ANNEXED TO RCWD DESPITE RCWD'S COMPLIANCE WITH THE TERMS OF THIS AGREEMENT, THE PRICE SET FORTH ABOVE SHALL SERVE AS LIQUIDATED DAMAGES, AS A REASONABLE ESTIMATE OF THE DAMAGES TO CONSOLIDATED PURSUANT TO CALIFORNIA CIVIL CODE SECTIONS 1671. EXCEPT AS PROVIDED BELOW, CONSOLIDATED WAIVES ANY AND ALL RIGHT TO SEEK OTHER RIGHTS OR REMEDIES AGAINST RCWD, INCLUDING WITHOUT LIMITATION, SPECIFIC PERFORMANCE. CONSOLIDATED HEREBY WAIVES THE PROVISIONS OF CALIFORNIA CIVIL CODE SECTION 3389.

Initials on behalf of:



RCWD



Consolidated

(c) Notwithstanding the foregoing, if the Property is not annexed to RCWD due to a failure by RCWD to comply with its obligations under this Agreement, Consolidated shall be entitled to pursue any damages to which Consolidated would have been entitled had RCWD condemned the Easement as of the effective date of this Agreement, as well as reimbursement of all out of pocket costs, attorneys' fees and expenses incurred (i) in developing this Agreement, (ii) in pursuing annexation or (iii)

otherwise in reliance on or in an effort to enforce this Agreement. However, Consolidated shall not be entitled to consequential damages or lost profits.

(d) Upon annexation of the Property to RCWD, the foregoing liquidated damage and waiver provisions shall be ineffective, and the respective rights, duties, and obligations of the parties shall be consistent with those of a California water district and its landowners, except as specifically set forth herein. No part of this Agreement shall be interpreted as a waiver by Consolidated of any such landowner rights which might otherwise arise upon annexation.

9. Temporary Construction Easement. Consolidated hereby grants to RCWD a temporary construction easement and right of entry over that portion of Property adjacent to the Easement area, such as may be reasonably necessary for the initial construction and placement of the pipelines described in Paragraph 1 above. RCWD shall be responsible to repair or reimburse Consolidated for any damage to the Property located outside of the Easement area caused by RCWD in its use of the temporary construction easement.

10. Detachment. In the event that the Property is annexed to RCWD, and subsequently Consolidated desires to detach any or all of the Property from RCWD, RCWD shall reasonably cooperate in such detachment to the extent RCWD determines at the time that such detachment will not adversely affect RCWD or its other landowners in any material way. RCWD shall not charge Consolidated more than the amount reasonably necessary to reimburse RCWD for its costs to serve the Property (or the portion thereof to be detached) actually incurred prior to the detachment, to the extent such costs have not been repaid or consist of obligations not yet payable. Such costs shall include, but shall not be limited to, a proportionate share of any costs incurred by RCWD after the date of this Agreement for any infrastructure or water supplies that benefit the portion of the Property to be detached.

11. Recordation. The parties agree that this Agreement shall be recorded in the Official Records of the County of Madera, State of California and all liens, encumbrances or other easements affecting the portion of the Property described in Exhibit "2" hereto shall be subordinated to this Easement when this Agreement is recorded

12. Further Assurances. Each party shall at all times do and perform all acts and things reasonably necessary or appropriate to effectuate this Agreement. Each party shall execute and deliver to the other party on ten (10) days written notice any further instruments or documentation that the other party may reasonably deem necessary or appropriate in order to effectuate the other party's rights or interests under this Agreement, any instrument or document deemed necessary by any Agency, or any of the documents referred to in or executed pursuant to this Agreement.

13. Attorneys' Fees. In the event any party hereto shall institute legal proceedings hereunder, pursuant to or in connection with this Agreement or any representation, warranty, covenant or agreement herein given, the prevailing party shall be entitled to recover in such proceedings its reasonable attorneys' fees and costs.

14. Binding Effect. This Agreement and all of the rights and obligations hereunder shall run with the land described on the attached Exhibits and shall be binding upon and inure to the benefit of the heirs, executors, administrators, successors and assigns of the parties hereto.

15. Governing Law. This Agreement shall be governed by and construed in accordance with the laws of the State of California.

16. Counterparts. Separate counterparts of this Agreement may be signed and together shall constitute one agreement, even though both parties may not have signed the same counterpart.

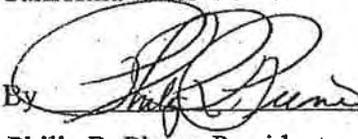
17. Headings and Definitions. The titles of the paragraphs of this Agreement are for the convenience of the reader only and no presumption or implication of the intent of the parties as to the construction of this Agreement shall be drawn therefrom.

IN WITNESS WHEREOF, the parties have executed this Agreement to be effective as of the date first above written.

CONSOLIDATED LAND COMPANY, a
California limited partnership

By 
William R. Tatham, Sr., general partner

ROOT CREEK WATER DISTRICT, a
California water district

By 
Philip R. Pierre, President

MADERA IRRIGATION DISTRICT, a
California irrigation district

By _____

Exhibit "1"

Property Description

Exhibit "2"

Easement Description

LEGAL DESCRIPTION

A 25 foot wide easement for pipeline operation and maintenance purposes above, over, across and through a portion of Parcel 3, as said parcel is shown on Parcel Map No. 2075, filed Book 27 of Maps, Pages 195 and 196, Madera County Records, being a portion of the southwest quarter of Section 29, and a portion of the southeast quarter of Section 30, Township 11 South, Range 20 East, Mount Diablo Base and Meridian; the centerline of said easement being more particularly described as follows:

Beginning at a point on the south line of said Parcel 3, distant along said line North 89° 28' 17" East, a distance of 20.00 feet from the southwest corner of said Section 29, said point being the endpoint of a non-tangent curve concave westerly, and having a radius of 1690.00 feet, with a radial bearing North 89° 22' 18" East; thence leaving said line

- 1) northerly, along the arc of said non-tangent curve, through a central angle of 17° 32' 02", an arc distance of 517.18 feet to a point of reverse curvature with a curve concave easterly, and having a radius of 1710.00 feet; thence
- 2) northerly, along the arc of said reverse curve, through a central angle of 17° 47' 11", an arc distance of 530.84 feet; thence
- 3) North 00° 22' 33" West, a distance of 161.74 feet; thence
- 4) North 24° 38' 14" West, a distance of 77.13 feet to the southerly boundary of the Madera Canal, as said canal is shown on said map.

Note: The sidelines and/or limits of said easement are to be lengthened or shortened to terminate southerly at the south line of said Parcel 3, and northerly at the southerly line of said Madera Canal.

END OF DESCRIPTION



CRAIG E. BAUM

EXHIBIT "A"

BEING A PORTION OF THE SOUTHWEST QUARTER OF SECTION 29 AND
A PORTION OF THE SOUTHWEST QUARTER OF SECTION 30, TOWNSHIP
11 SOUTH, RANGE 20 EAST, MOUNT DIABLO BASE AND MERIDIAN



MADERA CANAL

N24°38'14"W 77.13'

N00°22'33"W 161.74'

25'

SECTION LINE

R=1710.00'
L=530.84'
Δ=17°47'11"

SECTION 30

SECTION 29

DATE SIGNED: 9/20/06

DETAIL A
SCALE 1"=20'

LEGEND

 INDICATES PIPELINE EASEMENT

P.O.B. POINT OF BEGINNING

PARCEL 3 OF PARCEL MAP
No. 2075, BK 27 OF
PARCEL MAPS, PGS.
195-196, M.C.R.

R=1690.00'
L=517.18'
Δ=17°32'02"

SE COR.
SEC. 30

20'

RADIAL
N89°22'18"E

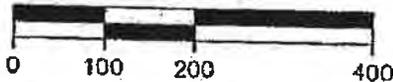
P.O.B.

SEE DETAIL A

N89°29'21"E 2650.11'

N89°28'17"E 2653.86'

SCALE IN FEET



PIPELINE EASEMENT

MADERA, CA

PROMOST & PRITCHARD
REGISTERED PROFESSIONAL LAND SURVEYORS
1000 S. GARDEN ST., SUITE 100
MADERA, CALIFORNIA 95361-1000
TEL: 562-250-1100 FAX: 562-250-1101

LAND SURVEYOR CRAIG E. BAUM
DATE 03/09/06 L.S. LICENSE NO. 13,780

Job No. 1434005
Dwg. No.

Date Revised
Approval

SCALE	1" = 20'
DRAWN BY	SP
CHECKED	
DATE	
SHEET	1 OF 1
DATE	1 2006

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Fresno

On February 16, 2006 before me, Suzanne J. Hirata, Notary Public,
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared William R. Tatham, Sr.
Name(s) of Signer(s)

personally known to me – OR – proved to me on the basis of satisfactory evidence to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



WITNESS my hand and official seal.

Suzanne J. Hirata
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: EASEMENT AND ANNEXATION AGREEMENT

Document Date: February 16, 2006 Number of Pages: 12

Signer(s) Other Than Named Above: Root Creek Water District & Madera Irrigation District

Capacity(ies) Claimed by Signer(s)

Signer's Name: William R. Tatham, Sr.

- Individual
- Corporate Officer
Title(s): _____
- Partner — Limited General
- Attorney-in-Fact
- Trustee
- Guardian or Conservator
- Other: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer Is Representing:
CONSOLIDATED LAND COMPANY

Signer's Name: _____

- Individual
- Corporate Officer
Title(s): _____
- Partner — Limited General
- Attorney-in-Fact
- Trustee
- Guardian or Conservator
- Other: _____

RIGHT THUMBPRINT OF SIGNER
Top of thumb here

Signer Is Representing:

Appendix C

**AGREEMENT BETWEEN
MADERA IRRIGATION DISTRICT
and
ROOT CREEK WATER DISTRICT
FOR THE CONVEYANCE AND SALE OF WATER**

THIS AGREEMENT FOR THE CONVEYANCE AND SALE OF WATER ("Agreement") is made and entered into by MADERA IRRIGATION DISTRICT, a California irrigation district ("MID"), and ROOT CREEK WATER DISTRICT, a California water district ("RCWD") (collectively, the "Parties") as of March 13, 2002.

RECITALS:

- A. WHEREAS, MID is an irrigation district organized under the California Irrigation District Law, codified at § 20500 et seq. of the California Water Code, that delivers water from Hidden Dam and Friant Dam under 25-year Long Term Renewal Contracts with the United States Department of Interior, Bureau of Reclamation ("USBR") to locations in Madera County for irrigation purposes.
- B. WHEREAS, RCWD is a water district organized under the California Water District Law, codified at § 34000 et seq. of the California Water Code, and serves a portion of southeastern Madera County currently consisting of 9,221 acres.
- C. WHEREAS, the Parties executed an "Agreement Concerning Agricultural, Municipal and Industrial Water Use Within Root Creek Water District" ("Root Creek Agreement") on December 30, 1999, with the Friant Water Users Authority ("FWUA"), Chowchilla Water District ("CWD") and certain Holding Contract owners and Landowners/Developers within RCWD.
- D. WHEREAS, the Root Creek Agreement recognizes that surface water supplies may become available to RCWD from: (1) Friant Dam flood flow releases unused by Friant Contractors; (2) Water transfers from sources outside of Madera County; (3) Water transfers from Central Valley Project ("CVP") water service or exchange contractors; (4) Water transfers from sources within Madera County; and (5) Purchase of water to supplement San Joaquin River water, first from MID and CWD, then if additional water is needed, purchase from other supplemental sources.
- E. WHEREAS, the Root Creek Agreement, Article III, section 2, provides that before obtaining supplemental water from any sources other than San Joaquin River flood flows, and Section 215 water purchased directly from the Bureau, RCWD shall first satisfy its water purchase requirements from supplies available for sale by MID, to the extent and on the same terms and conditions that MID is willing to sell such water to parties other than Friant Contractors or other CVP Contractors. In exchange MID agrees that RCWD shall have the first right to purchase any MID surface water available for sale outside its district, subject only to water sold to other Friant Contractors or CVP Contractors.

- F. WHEREAS, the Root Creek Agreement, under Article V, section 4, provides that the Parties will negotiate and execute an implementing agreement to construct necessary facilities to convey water to RCWD from MID's Lateral 6.2.
- G. WHEREAS, the United States constructed the Madera Canal as a part of the CVP for the carriage and distribution of waters of the San Joaquin River, which Canal is now operated by the Madera Chowchilla Water and Power Authority ("MCWPA"), pursuant to the "Cooperative Agreement Among the United States of America, the Madera Irrigation District, and the Chowchilla Water District Providing for Operation and Maintenance of Madera Canal and Associated Project Works," dated September 20, 1985, and the Joint Exercise of Powers Agreement by and between MID and CWD.
- H. WHEREAS, on April 30, 1985, MID and CWD entered into an agreement on the method of sharing capacity of the Madera Canal ("1985 Capacity Agreement"), which allocates the capacity of the Madera Canal during normal operations as 60% of the capacity to MID and 40% to CWD, and allows the use of whatever share of the other District's capacity is not being used. The Agreement further provides that this allocated capacity "shall apply regardless of the type of water being delivered to any district."
- I. WHEREAS, the Root Creek Agreement, under Article V, section 5, provides that the Parties will negotiate and execute an implementing agreement regarding water conveyance charges, capacity, terms and conditions.
- J. WHEREAS, the most convenient surface route to deliver water to RCWD is through the Madera Canal and MID Lateral 6.2.
- K. WHEREAS, the Parties desire to explore opportunities to cooperate and jointly participate in groundwater recharge projects in Madera County.
- L. WHEREAS, the Parties desire to cooperate and support one another, as appropriate, on Madera County and regional water issues.
- M. WHEREAS, upon the completion of the Environmental Impact Report ("EIR") for the Village of Gateway Development within RCWD, this Agreement will be reviewed and no physical implementation of the Agreement will occur prior to the completion of such EIR.

NOW THEREFORE, the Parties agree as follows:

ARTICLE I DEFINITIONS

As used in this Agreement, the terms set forth below have the following meanings.

- 1. "As-Available Capacity" shall mean any water conveyance capacity in the Madera Canal or Lateral 6.2 in excess of MID or CWD needs and the "Reserved

Capacity" made available to RCWD pursuant to this Agreement, which, if available, may be used by RCWD to convey its water.

2. "Building Permit" shall mean any building permit issued by the County of Madera, or any other public entity which may assume such authority, for construction in RCWD pursuant to any Tentative Map, Parcel Map or other entitlement.

3. "CVP Water" shall mean all water that is developed, diverted, stored, or delivered by the USBR in accordance with the statutes authorizing the CVP and in accordance with the terms and conditions of water rights acquired by the USBR pursuant to California law.

4. "CVP Class 1 Water" shall mean that supply of water stored in or flowing through Millerton Lake which, pursuant to MID's Long-Term CVP Water Service Contract, will be available for delivery from Millerton Lake and the Madera Canal as a dependable water supply during each year.

5. "CVP Class 2 Water" shall mean that supply of water which can be made available pursuant to MID's Long-Term CVP Water Service Contract for delivery from Millerton Lake and the Madera Canal, in addition to the supply of Class 1 Water. Because of its uncertainty as to availability and time of occurrence, such water will be undependable in character and will be furnished only if, as, and when it can be made available, as determined by the USBR.

6. "Village of Gateway" shall mean that certain property described in the Village of Gateway Area Plan dated November 2000.

7. "General Plan Amendment Approval by Madera County" shall mean certification of the Village of Gateway Environmental Impact Report based on the draft dated February 2001, approval of the Village of Gateway Area Plan, designation of the Village of Gateway as a new growth area and the running of any applicable period to appeal those decisions.

8. "Infrastructure Master Plan for Village of Gateway" shall mean that certain plan for infrastructure (including roadways, water, sewer and other urban infrastructure) within the Village of Gateway and the EIR for that plan as required by mitigation measures imposed by the County of Madera in its General Plan Amendment Approval for the Village of Gateway.

9. "Lateral 6.2" shall mean the canal constructed by the U. S. Bureau of Reclamation beginning at mile post 6.2 of the Madera Canal for the purpose of delivering irrigation water to lands within MID

10. "Madera Canal" shall mean the canal constructed by the USBR extending from Friant Dam to the Chowchilla River, for the purposes of flood control and delivering irrigation water to MID and CWD.
11. "Non-CVP Water" shall mean any water not deemed to be CVP Water.
12. "Non-Residential Equivalent Dwelling Unit ("e.d.u.")" shall be defined as follows: The number of e.d.u.'s in any permitted non-residential structure shall equal the total square feet of floor space divided by 500.
13. "Reserved Capacity" shall mean that water conveyance capacity in the Madera Canal or Lateral 6.2 that has been reserved by MID for use by RCWD pursuant to the terms of this Agreement, and held available during the term of this Agreement for RCWD use in conveying its water.
14. "Residential Equivalent Dwelling Unit ("e.d.u.")" shall mean any single family dwelling unit or any unit of a multi-family residential structure designed to house a single family or individual.
15. "Restoration Fund Costs" shall mean any rates, costs or charges payable to the Restoration Fund pursuant to the Central Valley Project Improvement Act, PL 102-575.
16. "Surplus Class 2 Water" shall mean Class 2 water made available to RCWD following a determination by MID that a Surplus Water Condition exists.
17. "Surplus Water Condition" shall mean a condition, as determined solely by MID, wherein the MID supply of Class 2 water, in combination with other water supplies available to MID, has resulted in the ability of MID to transfer water to RCWD without impacting current or future deliveries of water to MID agricultural customers.
18. "Uncontrolled Season" shall mean that period of time, typically occurring during the spring months of March through May, when the USBR has determined that there is a need to evacuate water from Millerton Lake in order to prevent or minimize a spill or meet flood control criteria, and has notified Friant long-term water service contractors that such condition exists. During an Uncontrolled Season, water taken by a Friant long-term water service contractor is in addition to the water supply declaration for the balance of the contract year.
19. "Uncontrolled Season Class 2 Water" shall mean water delivered as Class 2 Water during the period(s) when the USBR has declared an Uncontrolled Season.
20. "MID Long-Term CVP Water Service Contract" shall mean the "Long-Term Renewal Contract Between the United States and Madera Irrigation District

Providing for Project Water Service From Friant Division," Contract No. 175r-2891-LTR1 and as it may be renewed from time to time.

21. "The Root Creek Agreement" shall mean that certain "Agreement Concerning Agricultural, Municipal and Industrial Water Use Within Root Creek Water District" entered into December 30th 1999 by and among the Friant Water Users Authority, Madera Irrigation District, Chowchilla Water District and Root Creek Water District.

ARTICLE II TERM AND RENEWAL OF AGREEMENT

1. Term

This Agreement shall become effective upon execution by the Parties and shall terminate on February 28, 2026.

2. Initiation of Physical Performance

No physical performance, other than the payment of fixed or guaranteed payments due during 2002 through 2005 under this Agreement shall occur prior to environmental review of this Agreement under the EIR prepared by the County of Madera to review the environmental effects of Infrastructure Master Plan for the Village of Gateway, including the implementation of this Agreement.

3. Renewal

Upon date of termination, this Agreement shall be automatically renewed on the same terms and conditions, except as changes to the Agreement are necessary to reflect change in MID's CVP Long-Term Water Supply Contract. Either Party may provide notice of intent to negotiate revised terms for renewal, provided that such notice is made at least one year prior to the expiration of this Agreement.

ARTICLE III. CONVEYANCE FACILITIES AND CHARGES

1. Lateral 6.2

a. Capacity

i) Under this Agreement, RCWD is entitled to the use of Reserved Capacity in Lateral 6.2 of 25 cfs from May 1 to August 31 of each year, and 50 cfs from September 1 of each year until April 30 of the following year.

(1) RCWD shall have the first right of refusal for any increase in Reserved Capacity that MID may determine is available on Lateral 6.2 as a result of changed conditions or actions taken by MID. Should RCWD request an increase in available Reserved

Capacity, MID agrees to negotiate in good faith to make such capacity available.

(2) MID shall not reduce Reserved Capacity of RCWD unless required to do so by the USBR or by exercise of state or federal law. Should MID be required to reduce Reserved Capacity, the parties shall negotiate in good faith to adjust capacity charges commensurate with the changed circumstances.

(3) The Reserved Capacity is for the sole and exclusive use of RCWD and it shall not be assigned for any other purpose or to any other user.

ii) As-Available Capacity in excess of Reserved Capacity may be utilized by RCWD during each water year as it becomes available (for that year only) from MID's capacity provided:

(1) MID landowners and agricultural customers' water conveyance capacity needs are first satisfied, then RCWD shall have first priority on any available capacity.

(2) MID shall provide RCWD one day's notice of available capacity changes affecting the requested additional capacity by RCWD.

iii) Terms and Conditions Applicable to RCWD's Reserved Capacity and As-Available Capacity

(1) RCWD must provide MID at least 30 days' notice to initiate deliveries if Lateral 6.2 is out of service at the time delivery is requested by RCWD.

(2) If Lateral 6.2 is in service at the time delivery to RCWD is requested, RCWD shall give MID at least three days' notice of RCWD capacity requirements.

b. Delivery Locations

i) RCWD will use the existing diversion structure from Lateral 6.2 located at Station 129+35 ("Turnout 1-A"), or such structure at that location as modified to increase its diversion capacity.

ii) The existing diversion structure at Turnout 1-A is owned by MID to benefit MID Improvement District #3 landowners. Any modifications to such diversion structure to increase capacity shall be at the sole expense of RCWD, with the approval of MID and MID

Improvement District #3 landowners. RCWD will have the sole responsibility to obtain approval from MID Improvement District #3 landowners but MID will provide reasonable assistance in a mutually acceptable resolution.

iii) Any additional diversion locations from Lateral 6.2 by RCWD shall require the prior approval of MID, which shall not be unreasonably withheld.

c. Carriage Losses

i) Carriage losses for conveyance of RCWD water supplies in Lateral 6.2 shall be computed at 3% from Madera Canal outflow structure to delivery location at Turnout 1-A. Carriage losses to any additional future diversion locations shall be determined when additional diversion locations are approved by MID.

ii) If the only water conveyed in Lateral 6.2 is that being delivered to RCWD, the delivery amount shall be measured at the Madera Canal outflow structure into Lateral 6.2 and no carriage loss calculation will be necessary for Lateral 6.2.

d. Capacity and Conveyance Charges

i) Charges for Reserved Capacity And Other Cooperation

The charges assessed by MID to RCWD for the long-term assurance of availability of Reserved Capacity to convey RCWD water supplies through the Madera Canal and Lateral 6.2 and for the other assistance and cooperation provided to RCWD pursuant to this Agreement include three components. Fixed Reimbursement Payments prior to the construction of residential and commercial development within the Village of Gateway are intended to reimburse MID for prior and anticipated administrative and legal costs incurred in the development, environmental review and administration of this and other agreements.

Commencing in the year 2004, when construction of such units is expected to be underway, two other fees shall then be paid to MID by RCWD: an Impact Fee and an Annual Assessment Fee. The Impact Fee shall be a one-time fee paid by RCWD at the time a building permit is issued for each Equivalent Dwelling Unit for the purpose of defraying all or a portion of the cost of MID facilities related to the development project. The Annual Fee shall be applied annually to all Equivalent Dwelling Units existing at that time.

(1) Fixed Reimbursement Payments to MID by RCWD:

- A. The initial payment shall be \$100,000, which shall be made within 120 days of County of Madera Board of Supervisors final action to approve the Village of Gateway General Plan Amendment,
- B. The second payment of \$125,000 shall be made at the one-year anniversary of the initial payment.
- C. The third payment, expected to occur in 2004, shall be \$150,000, which shall be made upon certification of the applicable EIR and approval of the Infrastructure Master Plan for the Village of Gateway by Madera County.

(2) One-time Impact Fees payable to MID by RCWD at issuance of Building Permits by Madera County shall be paid by the fifteenth (15th) day of each month for Building Permits issued in the prior month based on the following rates:

- A. From 2004 to 2008, \$1,000 per Building Permit issued for each Residential e.d.u., and \$250 per Non-Residential e.d.u. For the year 2005 only, the minimum Impact Fee payable by RCWD shall be \$150,000 as additional reimbursement, provided that any Impact Fees paid in 2004 shall be credited toward meeting the \$150,000 required to be paid by the end of 2005.
- B. From 2009 to 2013, \$1,100 per Building Permit issued for each Residential e.d.u., and \$260 per Non-Residential e.d.u.
- C. From 2014 to 2018, \$1,200 per Building Permit issued for each Residential e.d.u., and \$270 per Non-Residential e.d.u.
- D. From 2019 to 2023, \$1,300 per Building Permit issued for each Residential e.d.u., and \$280 per Non-Residential e.d.u.
- E. From 2024 to 2026, \$1,400 per Building Permit issued for each Residential e.d.u., and \$290 per Non-Residential e.d.u.

F. Upon renewal of this Agreement, the Impact Fee shall continue to escalate in the manner described above (i.e., by \$100 per Residential e.d.u. and \$10 per Non-Residential e.d.u. every five years), unless otherwise agreed to by the Parties.

(3) Annual Assessment Fee payments to MID by RCWD shall be based upon the number of e.d.u.'s on the regular property tax roll of Madera County during each calendar year. The Annual Assessment Fee payments shall be made in two installments due on or before January 31 and May 31 of each year using the following annual unit rates:

A. Annual Payment Rate for 2004: \$80.00 per Residential e.d.u. and \$40.00 per Non-Residential e.d.u.

B. Each year thereafter the Annual Payment Rate for both Residential e.d.u. and Non-Residential e.d.u. shall increase by 2% per year (e.g., the payment rate for 2005 will be \$81.60 per Residential e.d.u. and \$40.80 per Non-Residential e.d.u.).

ii) **Conveyance Charges**

(1) Reserved Capacity Water conveyed by RCWD through the Madera Canal and Lateral 6.2 pursuant to this Agreement shall be subject to charges based on the cost per acre-foot of water conveyed, which will be determined each year based on MID's budget for that upcoming year. (Such annual rate will be established to cover MID operations, maintenance and administrative costs of conveying water, including MID's share of costs to convey water through the Madera Canal.)

(2) The conveyance charge shall reflect the full operations cost of Lateral 6.2 if the canal would not otherwise be operating at the time RCWD is using such capacity.

(3) The conveyance charge shall be calculated based upon the amount delivered as measured at Turnout 1-A, plus Carriage Losses as defined in Section III 1.c. above, or if the only water conveyed in Lateral 6.2 is that being delivered to RCWD, the delivery shall be measured at the Madera Canal turnout structure.

(4) The payment of conveyance charges shall be due within 30 days of the last day of the month in which water is delivered.

2. Madera Canal

a. Use of MID Share of Reserved Capacity in Madera Canal

Under this Agreement, RCWD may also utilize a portion of MID's allocation of Madera Canal capacity equal to RCWD's Reserved Capacity in Lateral 6.2 set out in Section III 1.a.i) above, under the following terms and conditions:

- i) Utilization of MID's share of Reserved Capacity in the Madera Canal shall be for a 25-year period (to match term of the current MID CVP Contract) and shall be renewable on the same terms and conditions with the exception of any changes required by USBR in any renewal of the MID CVP Contract.
- ii) RCWD's utilization of MID's Reserved Capacity in the Madera Canal may be subject to necessary conveyance agreements with MCWPA and USBR.
- iii) As provided in Section III 1.a.i)(3), the Reserved Capacity is for the sole and exclusive use of RCWD and it shall not be assigned for any other purpose or to any other user.

RCWD payment to MID for its share of Reserved Capacity in the Madera Canal is included in RCWD's payment to MID for Lateral 6.2 Reserved Capacity as set forth in Section III 1.d.i) of this Article.

b. RCWD Use of Additional As-Available Capacity in Madera Canal

Under this Agreement, RCWD may also utilize As-Available Capacity in excess of its Reserved Capacity in MID's allocation in the Madera Canal on the following terms and conditions:

- i) As-Available Capacity in the Madera Canal may be available on an annual basis, subject to satisfying needs of MID and CWD conveyance requirements.
- ii) If the Madera Canal is not currently operating, RCWD must give MID at least 30 days' notice of request for As-Available Capacity. If Canal is out of service due to scheduled Canal maintenance, the 30-day notice period may be modified by mutual agreement of the Parties and MCWPA with the intent of operating the canal as soon as reasonably possible. (Such minimum maintenance period will

be determined annually by the MCWPA in consultation with the Parties.)

iii) If Madera Canal is operating, RCWD must give MID at least three days' notice of request for As-Available Capacity.

iv) MID must give RCWD one day's notice of any change in As-Available Capacity.

c. Terms and Conditions Applicable to RCWD Use of Both Reserved Capacity and As-Available Capacity in the Madera Canal

i) RCWD's use of capacity in the Madera Canal shall not include the annual 45-day period of "down" time for Canal maintenance. MID shall give RCWD 30 days' prior written notice of such scheduled Canal maintenance down time.

ii) The use of capacity provided in this Agreement in the Madera Canal shall in no manner be construed as a warranty or covenant by MID that any water is available to be conveyed under such RCWD capacity and such conveyance shall be subject to the USBR ~~minimum release requirements in place at Friant Dam.~~ (The availability of any water to be conveyed under the capacity provided in this section depends upon a variety of factors beyond MID's control, such as annual precipitation, increased use by MID and CWD landowners, and other factors.)

iii) The delivery location of waters conveyed through the Madera Canal pursuant to this section shall be at the Lateral 6.2 diversion on the Madera Canal.

iv) RCWD is responsible for scheduling the water deliveries with MID.

v) Carriage Losses

(1) There shall be no carriage losses within the Madera Canal associated with CVP water whose delivery point is at Lateral 6.2.

(2) Carriage losses for all water that is not CVP water shall be calculated pursuant to Warren Act provisions in any applicable USBR Contracts.

vi) Conveyance Charges for the Madera Canal

(1) There shall be no additional charge to RCWD for the conveyance of water that is purchased directly from MID pursuant to other terms of this Agreement.

(2) RCWD will pay all operations costs of the Madera Canal to MID if the Canal is operated solely for the conveyance of water to RCWD.

ARTICLE IV. SALE OF MID WATER AND OPTIONS TO PURCHASE

1. Options to Purchase MID Water

RCWD shall pay an annual option fee to MID to secure the first right to purchase surplus water from MID (if any) on the following terms and conditions for each source of water specified:

a. Surplus Class 2 Water will be made available by MID for purchase by RCWD pursuant to an annual option by RCWD upon the occurrence of:

i) A determination by MID based on June 1 or later water supply conditions, that Class 2 Water available to MID, in combination with other supplies available to MID, has resulted in the ability of MID to transfer water to RCWD without impacting current or future deliveries to MID agricultural customers.

ii) If USBR issues a notice of reduced allocation of Class 2 Water after delivery of Surplus Class 2 Water by MID to RCWD is complete, RCWD shall render replacement of water to MID from other water supply sources within one year of date of pre-reduction delivery.

b. Uncontrolled Season Class 2 water will be available for purchase by RCWD pursuant to an annual option by RCWD only upon MID determination that there is water in excess of MID's ability to divert and deliver water to MID landowners, recharge facilities or storage facilities, including those facilities that may be developed in conjunction with RCWD, during the uncontrolled season.

2. Option Payments

a. RCWD shall purchase annually from MID an option to receive 10,000 acre-feet of MID water.

b. The total annual option price shall be \$10 per acre-foot per year, equaling a \$100,000 annual payment, payable no later than February 1 of each calendar year.

- c. Option payments are non-refundable and MID makes no guarantee that surplus water will be available in any year for purchase under these options.
- d. RCWD shall receive full credit for option payments for water purchased in future years up to a maximum \$50.00 per acre-foot purchased in any year.
- e. Annual Option payments by RCWD shall not be required whenever RCWD has accumulated an unused \$500,000 credit because MID has been unable to make water available.
- f. Option payments by RCWD shall be forfeited at a rate of \$10.00 per acre-foot for water made available by MID but not taken by RCWD.

3. Purchase of Water By Exercise of Option

- a. **Price of MID CVP Water Purchased Under Exercise of Option**
If RCWD exercises its option to purchase water from MID, the purchase price shall be set at \$50 per acre-foot above MID cost of water. The MID cost of water determination will include the following: CVP contract rate (currently \$10.05/acre-foot); Restoration Fund Charges; any incremental costs charged by USBR; any USBR surcharge for water transferred to non-CVP Contractors; and San Luis/Delta Mendota Authority charges, and other charges that may be imposed upon MID water deliveries.
- b. **Delivery of MID Non-CVP Water Supplies Under Exercise of Option**
 - i) MID may deliver Non-CVP Water, if available, in lieu of CVP Class 2 Water.
 - ii) If Non-CVP water is delivered to RCWD in lieu of Class 2 Water, cost adjustment will be made to reflect increases or decreases in MID or RCWD costs, including but not limited to:
 - (1) Restoration Fund Costs, if any;
 - (2) Non-CVP water conveyance charges and carriage losses.
- c. **Cooperation in Acquisition of Supplemental Supplies**
MID will cooperate and assist RCWD in securing supplemental water supplies from other sources. If MID secures such supplies on behalf of RCWD, the following charges shall be assessed by MID to RCWD:

- i) The purchase price by RCWD shall be \$50 per acre-foot above MID cost in securing such supplies;
- ii) MID shall apply option payments previously made to MID by RCWD to the price payable by RCWD for such supplemental supplies up to \$50 per acre-foot.

4. **Billings and Payments**

a. **Compensation Factor for Carriage Losses**

The billing for water shall be based on charges per acre-foot of metered water taken by RCWD at the point of delivery. In order to compensate for the carriage loss set forth in Section III.1.c (Carriage Losses), the billing for all water charges under this Agreement shall be based on the amount of metered water taken by RCWD multiplied by a factor of 1.03, except as otherwise provided in Section III.1.c.

b. **Billing Due Dates**

RCWD will be billed separately by MID for water purchase amounts and water conveyance costs. All payments shall be due within 30 days of the last day of the month in which water is delivered. Interest shall be charged for all delinquent payments at a rate of 1 percent per month from the due date to the date of payment.

ARTICLE V

CONDITIONS AND OBLIGATIONS OF PARTIES

1. **Madera Irrigation District**

a. **Assistance with Environmental Approvals**

MID agrees to provide reasonable assistance to RCWD, as appropriate on water issues, on the County, State and Federal environmental approvals for the Village of Gateway General Plan Amendment, the Infrastructure Master Plan for the Village of Gateway, subsequent tentative and subdivision maps, the Root Creek Agreement and this Agreement.

b. **Provide Reasonable Support at Gateway Village Entitlement Hearings**

MID agrees to provide RCWD reasonable support on water issues at all entitlement hearings for the Village of Gateway General Plan Amendment, the Infrastructure Master Plan for the Village of Gateway, subsequent tentative and subdivision maps before the Madera County Planning Commission and Board of Supervisors.

c. Provide Support for Future Annexations to RCWD

MID agrees to provide RCWD reasonable support for additional future annexations to RCWD, providing such annexations are subject to the provisions of the Root Creek Agreement and this Agreement.

d. Provide Support for Special RCWD Legislation

MID agrees to provide RCWD reasonable support for State legislation to expand the powers of RCWD to allow RCWD to provide roadways, public buildings and school facilities, parks, street lighting and landscaping, electricity, natural gas, telecommunications, and other utilities and urban services and contract for police and fire services within the boundaries of RCWD. MID acknowledges, however, that nothing in this Agreement entitles MID to participate in any additional revenue generated by RCWD from any activities authorized by the special legislation.

e. Provide Assistance in Obtaining Pipeline from RCWD to Lateral 6.2

MID shall provide reasonable assistance to RCWD to obtain an easement to deliver water from Turnout 1-A on Lateral 6.2 to the boundary of RCWD.

2. Root Creek Water District

a. Indemnification of MID by RCWD

It is the understanding of the Parties hereto, and the intention of this Agreement, that the execution of this Agreement by MID and all actions taken by MID under this Agreement are to be performed at the expense and risk of RCWD, and that RCWD shall defend, indemnify and hold MID harmless against any loss, expense, damage or liability of any kind whatsoever, including attorneys' fees, arising out of or in connection with the sale or conveyance of water or any other action taken under this Agreement.

b. Future Lands Annexed or Served by RCWD

All additional lands annexed or served by RCWD after the date of execution of this Agreement shall be annexed or served by RCWD subject to the terms and provisions of the Root Creek Agreement and this Agreement.

c. RCWD Commitment to Purchase Water First from MID and CWD

In purchasing its necessary water supplies, RCWD shall purchase such water first from MID and then CWD, if available, prior to purchasing water from any other sources.

d. **RCWD Commitment Not to Sell or Provide Water Service to Lands Outside of RCWD Boundaries**

RCWD shall not sell or provide water service utilizing water purchased from MID to lands outside of RCWD boundaries without the prior approval of MID.

e. **Provision of Services Only to Properties Subject to a Groundwater Management Plan**

RCWD will provide its services, including but not limited to, provision of water, wastewater treatment, flood control, electrical power, natural gas, telecommunications, public facilities, or any other urban or M & I services, only to properties that have adopted or are subject to a groundwater management plan that stipulates to water balance, and, if applicable, are subject to an agreement to limited consumption of San Joaquin River waters pursuant to USBR Holding Contracts, similar to the limitations imposed in the Root Creek Agreement.

ARTICLE VI

GENERAL PROVISIONS

1. **Compliance with Environmental Laws**

The Parties shall comply with all applicable federal, state and local environmental laws and regulations, and take all steps necessary to assess whether the activities described in this Agreement may adversely impact threatened or endangered species, critical habitat or other environmental resources regulated pursuant to the federal Endangered Species Act, the California Endangered Species Act and other applicable state and federal laws relating to the protection of environmental resources.

2. **Enforcement of Agreement**

If default shall be made by any Party in any provision contained in this Agreement, such default shall not excuse the other Party from fulfilling its obligations under the Agreement and such other Party shall continue to be liable for the performance of all obligations herein contained. The Parties hereby declare that this Agreement is entered into for the benefit of all Parties to the Agreement and each Party shall have the right to enforce this Agreement, and all the obligations of each Party hereunder, by whatever lawful means that^o Party deems appropriate.

3. **Recording**

This Agreement shall be recorded in the Official Records of Madera County to bind the land within RCWD to the extent legally permissible and to make an official record of the agreement of the Parties.

4. **Best Efforts/No Guaranty**

When this Agreement requires any Party to assist, cooperate, negotiate, facilitate or otherwise participate in a process to obtain a mutually desired result described in this Agreement, all that is required of that Party is that they exert their reasonable and appropriate best efforts in relation to the matter described in this Agreement. In agreeing to cooperate, assist or negotiate in good faith, no Party is endeavoring to guaranty any result describe or sought by this Agreement.

5. **Uncontrolled Forces**

If any of the Parties to this Agreement are prevented in whole or in part from delivering wheeling or receiving water as a result of forces beyond their control, all Parties are relieved from the obligations to the extent they are reasonably unable to complete the obligation due to the uncontrollable force. Uncontrollable forces shall include, but are not limited to, earthquakes, fires, tornadoes, floods and other natural disasters. However, each Party shall be responsible for payment of any costs incurred on its behalf by the other Party before the occurrence of the uncontrollable force.

6. **Waste and Unreasonable Use**

Nothing in this Agreement is intended or shall be construed as condoning any waste or unreasonable use of water. All Parties specifically retain their rights and responsibilities as water purveyors to ensure that water within their jurisdiction is put to reasonable and beneficial use.

7. **Remedies - Specific Performance**

The Parties acknowledge that both groundwater and surface water are unique and irreplaceable resources. Therefore, monetary compensation or other remedies at law will not be sufficient to cure a breach of this Agreement. Thus, the Parties agree that in addition to all remedies at law, specific performance shall be available to all Parties to enforce the terms of this Agreement.

8. **Costs**

The costs and expenses incurred for the preparation of this Agreement shall be paid by each Party subject only to the reimbursement of MID set forth above.

9. **Time**

Time is of the essence of this Agreement and each and all of its provisions.

10. Effect of Headings

The subject headings of the articles and paragraphs of this Agreement are included for purposes of convenience only and shall not affect the construction or interpretation of any of its provisions.

11. Entire Agreement

This Agreement constitutes the entire agreement between the Parties pertaining to the subject matter contained in it and supersedes all prior and contemporaneous agreements, representations, and understandings of the Parties. No supplement, modification, or amendment to this Agreement shall be binding unless executed in writing by all of the Parties hereto. It is understood by the Parties that this Agreement may be subject to additional mitigation measures if required by the EIR to be prepared for the Village of Gateway Amendment to the Madera County General Plan, the Infrastructure Master Plan for the Village of Gateway, subsequent tentative or subdivision maps for the Village of Gateway.

12. Waiver

Waiver of any breach of this Agreement by any Party hereto shall not constitute a continuing waiver or a waiver of any breach of the same or another provision of this Agreement.

13. Counterparts

This Agreement may be executed in any number of counterparts and each such counterpart shall be deemed to be an original instrument, all of which together shall constitute one and the same instrument.

14. Binding Effect

This Agreement shall be binding upon and inure to the benefit of the heirs, executors, administrators, assigns and successors of the Parties hereto, and shall bind and apply to all property subsequently annexed to RCWD or any other party and shall be recorded against subsequent annexed land.

15. Survival of Agreement

The provisions of this Agreement and the covenants and conditions contained herein shall be continuous and shall survive any annexation or other change in the boundaries of RCWD and any transfer of ownership of any Holding Contract property or other property within RCWD.

16. Attorneys' Fees

Should any litigation be commenced between the Parties hereto concerning this Agreement or the rights and duties of any Party in relation thereto, the Party prevailing in such litigation shall be entitled, in addition to such other relief as may be granted, to recover from the losing Party a

reasonable sum for its attorneys' and paraprofessionals' fees and costs in such litigation, or any other separate action brought for that purpose.

17. Governing Law

This Agreement shall be governed by the laws of the State of California.

18. Rules of Construction and Word Usage

All words used in the Agreement shall be construed to include the plural as well as the singular number and vice versa. Words used herein in the present tense shall include the future as well as the present, and words used in the masculine gender shall include the feminine and neuter genders.

19. Parties in Interest

Nothing in this Agreement, whether expressed or implied, is intended to confer any rights or remedies on any persons other than the Parties hereto and their respective successors and assigns, nor is anything in this Agreement intended to relieve or discharge the obligation or liability of any third person to any Party to this Agreement, nor shall any provision give any third person any right of subrogation or action over and against any Party to this Agreement.

20. Notices

All notices and other communications required under this Agreement shall be in writing and shall be deemed to have been duly given on the date of service, if served personally on the person to whom notice is to be given, or on the third (3rd) day after mailing, if mailed to the Party to whom notice is to be given by first class mail, registered or certified, postage prepaid, and properly addressed as follows:

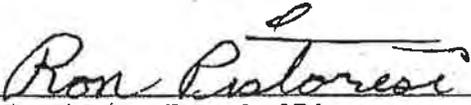
To Stephen H. Ottemoeller, General Manager, at:
Madera Irrigation District
12152 Road 28 ¼
Madera, CA. 93637-9199

To Christopher L. Campbell, Counsel, at:
Root Creek Water District
5260 N. Palm Ave., Suite 421
Fresno, CA 93704

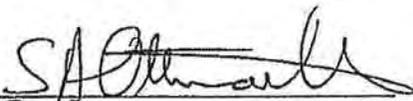
or at such other address as any party may, by like notice, designate to the other Party in writing.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the day and year first above written.

MADERA IRRIGATION DISTRICT


By President - Board of Directors

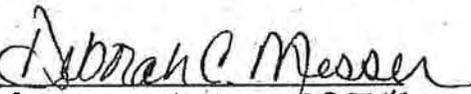
Attest:

By 
GENERAL MANAGER

ROOT CREEK WATER DISTRICT


By President - Board of Directors

Attest:

By 
SECRETARY ROOT CREEK
WATER DISTRICT

CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Madera

} ss.

On March 13, 2002 before me, Lela K. Beatty, Notary Public

Date

Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Phillip R. Pierre

Name(s) of Signer(s)

- personally known to me
 proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Place Notary Seal Above

WITNESS my hand and official seal.

Lela K. Beatty
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Agreement Between MID & Root Creek WD for the Conveyance & Sale of Water
Document Date: 3/13/02 Number of Pages: 20

Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer

- Signer's Name: _____
- Individual
 Corporate Officer — Title(s): _____
 Partner — Limited General
 Attorney in Fact
 Trustee
 Guardian or Conservator
 Other: _____

Signer Is Representing: Root Creek Water District



CALIFORNIA ALL-PURPOSE ACKNOWLEDGMENT

State of California

County of Madera } ss.

On March 13, 2002, before me Lela K. Beatty, Notary Public
Date Name and Title of Officer (e.g., "Jane Doe, Notary Public")

personally appeared Len Pistaresi
Name(s) of Signer(s)

- personally known to me
- proved to me on the basis of satisfactory evidence

to be the person(s) whose name(s) is/are subscribed to the within instrument and acknowledged to me that he/she/they executed the same in his/her/their authorized capacity(ies), and that by his/her/their signature(s) on the instrument the person(s), or the entity upon behalf of which the person(s) acted, executed the instrument.



Place Notary Seal Above

WITNESS my hand and official seal.

Lela K. Beatty
Signature of Notary Public

OPTIONAL

Though the information below is not required by law, it may prove valuable to persons relying on the document and could prevent fraudulent removal and reattachment of this form to another document.

Description of Attached Document

Title or Type of Document: Agreement Between MID & Root Creek WD for the Cooperation & Sale of Water
 Document Date: 3/13/02 Number of Pages: 20

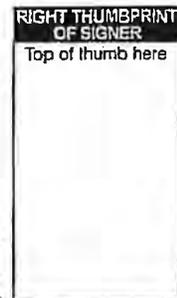
Signer(s) Other Than Named Above: _____

Capacity(ies) Claimed by Signer

Signer's Name: _____

- Individual
- Corporate Officer — Title(s): _____
- Partner — Limited General
- Attorney in Fact
- Trustee
- Guardian or Conservator
- Other: _____

Signer Is Representing: Madera Irrigation District



Appendix D

DUPLICATE ORIGINAL

AGREEMENT CONCERNING AGRICULTURAL, MUNICIPAL AND INDUSTRIAL WATER USE WITHIN ROOT CREEK WATER DISTRICT

This Agreement Concerning Agricultural, Municipal and Industrial Water Use Within Root Creek Water District ("Agreement") is entered into this 30th day of December, 1999, by and among FRIANT WATER USERS AUTHORITY ("Authority"), MADERA IRRIGATION DISTRICT ("MID"), CHOWCHILLA WATER DISTRICT ("CWD"), and ROOT CREEK WATER DISTRICT ("RCWD") (collectively, the "District Parties"). This Agreement shall further be between the District Parties and holding contract owners (as defined below) who sign this Agreement, and all landowners or developers who subsequently sign the Consents to be Bound by this Agreement as set out below. For the purposes of this Agreement, "Parties" shall refer collectively to the District Parties, any holding contract owner who signs this Agreement, and any others who are made Parties by agreement.

RECITALS:

A. The Authority represents 25 water and irrigation districts, including CWD and MID (the "Member Agencies"), who each contract with the United States Department of Interior, Bureau of Reclamation (the "Bureau") for San Joaquin River water impounded by Friant Dam and delivered through the Madera and the Friant-Kern Canals. The water and irrigation districts and municipalities who have contracts to obtain water deliveries from the Friant-Kern and Madera Canals, including all Member Agencies and all additional contractors, shall be referred to collectively as the "Friant Contractors."

B. MID and CWD each contract with the Bureau for San Joaquin River water impounded by Friant Dam and delivered through the Madera Canal.

C. RCWD is a new water district serving a portion of Southeastern Madera County currently consisting of 9,234 acres. A legal description of RCWD is attached as Exhibit A.

D. The "Holding Contract Owners" are certain landowners within RCWD who own certain properties that are subject to contracts with the United States acting through the Bureau (the "Holding Contracts"). The Holding Contracts provide for the property to obtain water directly from the main stem of the San Joaquin River downstream from Friant Dam. The signatories to this Agreement disagree with each other as to the scope of that right, including the amount of water which may be utilized under each Holding Contract, where that water may be utilized, and the purposes for which such water may be utilized.

E. The Holding Contracts within the RCWD Boundaries are numbers 65, 67, 69, and 74. The RCWD boundaries also include a claimed riparian parcel that is described in the Bureau's offer for Holding Contract number 72. The land included within RCWD and described in those four Holding Contracts and the claimed riparian parcel consists of a combined total of 2,211 acres. The Parties acknowledge that there is a dispute whether all the land described in the Holding Contracts is entitled to water pursuant to the terms of the Holding Contracts. For the purposes of this Agreement, the term "Holding Contracts" shall be used to mean only the four signed holding contracts and the claimed riparian parcel located within the current boundaries of RCWD.

F. RCWD desires to obtain additional surface water supplies to supplement the surface water and groundwater already available within RCWD and to correct the current groundwater overdraft within RCWD by utilizing direct and in lieu recharge programs. For the purposes of this Agreement, direct recharge means the application of water to land (either in spreading basins or intentional over irrigation) to provide recharge by direct

percolation. For the purposes of this Agreement, in lieu recharge means reducing groundwater pumping by providing surface water supplies to users that would otherwise pump groundwater. The amount of effective recharge is the amount of water available for extraction in the basin pursuant to Article II, Paragraph 5 of this Agreement

G. The "Gateway Developers" who are concurrently signing a Consent to be Bound by this Agreement desire to develop approximately 2,400 acres within RCWD to residential, commercial and industrial uses according to the terms of the Gateway Village plan submitted to the County of Madera (the "County"). The Gateway Developers intend to rely entirely on groundwater delivered by RCWD to supply their development ("M&I") water needs. To ensure a long-term, high-quality groundwater supply for the Village of Gateway, the Gateway Developers desire, through RCWD, to begin a program in cooperation with the District Parties and the County to address the existing groundwater overdraft in Southeastern Madera County.

H. The Parties desire to enter into this Agreement due to their mutual interest in the reasonable use and allocation of the waters of the San Joaquin River and/or preservation of the groundwater supply within the County, to fully resolve the current and any potential disputes among the Parties as to the scope of the rights to water under the Holding Contracts, and to comply with the Madera County General Plan Policies concerning water supply and delivery. The Parties believe that the creation of RCWD and the potential for municipal and industrial development in Southeastern Madera County creates both a need and an opportunity to comprehensively utilize available water resources for the mutual benefit of all Parties. It is the intent of the Parties that neither the development of RCWD's water supply nor conversion of lands within RCWD to municipal and industrial uses will have any adverse effects on established users of groundwater in

Southeastern Madera County, on established users of San Joaquin River water, or on the ability of any entity to meet current or future environmental requirements pertaining to San Joaquin River water.

I. Although the Authority cannot bind its members to this Agreement, it has concluded that this Agreement affords the requisite assurances to Friant Contractors that the use of water within RCWD will not adversely impact the water supply available from the Friant Division.

NOW, THEREFORE, the Parties agree as follows:

ARTICLE I

APPLICATION OF THIS AGREEMENT

1. Root Creek Water District. This Agreement shall apply to the operation of Root Creek Water District to obtain water for groundwater recharge and direct surface deliveries for agricultural and Municipal and Industrial ("M&I") uses. This Agreement shall apply to all water rights, water service or other transactions exercised by RCWD in its own name or on behalf of others. This Agreement shall not, however, apply to the individual exercise of any existing or future water rights by any Holding Contract Owners who do not sign this Agreement within RCWD solely for the account of those individual owners. Furthermore, any rights exercised by RCWD in delivering water to any landowner or water user within RCWD, including exercise of any landowner's overlying rights, whether in its own name or on behalf of others, shall be used exclusively by RCWD, and they shall not be concurrently exercised by any other owner of that right.

2. Holding Contract Owners. Any Holding Contract Owner that desires to avail itself of the settlement of potential disputes concerning the validity and scope of the rights granted in the Holding Contracts, all as set out in Article IV below, shall sign this

Agreement. As to non-signing Holding Contract Owners and those holding contracts outside RCWD, the Parties will retain the right to assert any claim, action or objection concerning the use of San Joaquin River water under such contracts.

3. Municipal and Industrial Users. For the purposes of this Agreement, an "M&I user" shall mean any water user that includes more than four residential units or any office or industrial facility. On farm labor camps and farmsteads for people who own or work in commercial agricultural production and existing agricultural office, processing or other support facilities (and repairs and replacement of the same approximate size and scope) shall not be included within the definition of M&I user. However, agricultural processing or other support facilities constructed after the date of this Agreement shall be included in such definition. The Parties acknowledge that RCWD is agreeing to the terms of this Agreement as a condition of providing M&I water service. Therefore, RCWD agrees that any M&I user within RCWD that desires to obtain M&I water service from RCWD, either directly or through participation in RCWD's groundwater recharge program shall be required to enter into an M&I Consent to be Bound by this Agreement substantially in the form attached as Exhibit B.

4. Effect of Consents. A Consent to be Bound shall not be revocable and shall modify the contract or other rights subject to that Consent so long as this Agreement is in effect.

ARTICLE II

PURPOSE AND COMMITMENTS OF ROOT CREEK WATER DISTRICT

1. Creation of RCWD/Purpose of Agreement. The District Parties, the County and others supported the creation and development of RCWD as the District

Parties and the County will benefit from RCWD comprehensively addressing the water supply needs within RCWD.

2. Increased Water Supply Goal. The District Parties agree to enter into this Agreement to assist RCWD in providing a water supply within its boundaries consistent with the District Parties' ongoing efforts to improve the total beneficially-useable water supply on the east side of the San Joaquin Valley and Southeastern Madera County. RCWD agrees to manage the water available to it from all existing sources and to obtain new water sources to achieve the goal of increasing the water supply that can be beneficially used within RCWD and, as a result, in Southeastern Madera County. In particular, RCWD shall stabilize and improve groundwater levels within RCWD boundaries and provide a firm annual water supply to support urbanization planned within RCWD.

3. No Adverse Impact on Existing Water Users. RCWD agrees that the operations of RCWD in providing M&I water service as set out in this Agreement shall be achieved with no long-term adverse impacts (as defined in Article II Section 6 below) on existing groundwater and surface water users in Madera County or on those other water users who receive water from the Friant system. Diversion of water by RCWD for use within RCWD shall not result in degradation of the quality or reduction of the quantity of water from the existing surface or groundwater sources currently utilized by (1) water users in the County, (2) Friant Contractors, or (3) downstream users of San Joaquin River water. RCWD also acknowledges that its water use may be impacted by current or future downstream environmental requirements.

4. Conjunctive Use Program. The Parties acknowledge that a major purpose of RCWD is enhancement of the groundwater resource within the RCWD

boundaries. Therefore, all Parties acknowledge that RCWD plans to bank surface water in the underground within and up and down gradient of RCWD to the maximum extent possible considering the constraints of the local aquifer and the ability to deliver water to RCWD. RCWD and landowners within RCWD are currently engaged in feasibility studies to develop an M&I conjunctive use program incorporating all of the following to the extent reasonably possible: reuse and reclamation of return flows, capture and groundwater recharge of currently unused local storm water flows, capture and groundwater recharge with San Joaquin River flood flows when available, groundwater recharge with and/or direct use of imported surface water, and off-site banking of surface water in the underground within Madera County or the Friant Service area. RCWD agrees, immediately following an agreement on conveyance charges with MID, to implement an aggressive, conjunctive use program within RCWD designed, in accordance with the feasibility study results, to maximize the water that is available for beneficial use within the RCWD boundaries, provided that such banking and subsequent groundwater extraction will not adversely affect any parties to this Agreement or adjacent landowners.

5. Groundwater Performance Criteria Applicable to RCWD. The RCWD groundwater management plan (the "Plan") indicates that the current groundwater usage within RCWD is contributing to groundwater overdraft by approximately 2,500 acre feet per year. To ensure a stable, reliable high-quality water supply within RCWD for agricultural and M&I use, RCWD agrees reduce to zero its contribution to groundwater overdraft within five years following completion of a facility to convey surface water to RCWD from MID lateral 6.2 as provided below. RCWD agrees to maintain such zero contribution to groundwater overdraft, on average, thereafter. The Parties acknowledge

that the conjunctive use program planned by RCWD intends to recharge more than is used in wet years and to extract more than is recharged in dry years. The commitment being made by all Parties is to assist RCWD in obtaining enough water in wet years to eliminate the RCWD contribution to groundwater overdraft assuming hydrologic conditions consistent with the period 1975 through 1995. Eliminating the RCWD contribution to groundwater overdraft shall be achieved by any combination of consumptive water use reductions that occur within RCWD (as compared to the consumptive use within RCWD as of the date of this Agreement), intentional groundwater recharge, or in lieu recharge from supplying surface water to agricultural uses within RCWD that currently rely on groundwater. The RCWD groundwater overdraft elimination program shall only be credited with the extractable portion of intentionally-recharged water based upon reasonable recharge/extraction ratios to be determined by RCWD based on applicable data and consultation with MID and CWD. The RCWD groundwater overdraft elimination program must assume that all Holding Contract water is currently utilized and assume that all Holding Contract supplies within RCWD are subject to reduction pursuant to this Agreement. All surface water imported by RCWD and accounted as balancing the water usage within RCWD shall be either Unused Flood Flows (defined below) or new water obtained for RCWD pursuant to this Agreement or otherwise. The Parties acknowledge that bringing RCWD's water usage into balance will not alone stabilize groundwater levels within RCWD as there are many significant contributors to the current overdraft in Southeastern Madera County.

6. Definition of Long-Term Adverse Impact and Unused Flood Flows.

For the purposes of this Agreement, a "long-term adverse effect on an existing water user"

shall be a reduction in surface water availability in any year, or a decline in groundwater levels that persists for five years.

For the purposes of this Agreement, "Unused Flood Flows" shall be flows of the San Joaquin River that are not diverted by any other Friant Contractors and would not otherwise be diverted by downstream users pursuant to their rights thereto or for satisfying current or future environmental requirements pertaining to the San Joaquin River.

ARTICLE III

SURFACE WATER SUPPLIES FOR RCWD

1. San Joaquin River Water Available to RCWD. In periods of high runoff on the San Joaquin River, water is sometimes flood released from Friant Dam because no Friant Contractors desire to take delivery of the water as it is available. The flood released water has the potential to be directly diverted from the San Joaquin River or delivered through the Madera Canal and utilized within RCWD. When flood releases are projected to occur, the Authority agrees to notify RCWD that water is potentially available at the same time notice is provided to all Friant Contractors. When Friant Contractors do not request delivery of all available San Joaquin River floodwater, the Authority, MID and CWD will use their best efforts to assist RCWD to obtain those Unused Flood Flows either through Bureau 215 water purchases, temporary Class 2 contracts, water transfers or other means at the lowest prevailing rate (including CVPIA Restoration Fund charges when applicable) available for water districts. The District Parties agree their intention is that no payments will be made to any Friant Contractors for Unused Flood Flows other than reimbursement for payments made by a contractor to the Bureau, the Authority or the Madera-Chowchilla Water and Power Authority for

that water or MID delivery charges for water delivered through its canal system to be negotiated between MID and RCWD in accordance with Paragraph 4 of Article V. The Parties acknowledge that certain regulatory approvals may be required to allow RCWD to obtain Unused Flood Flows, and the District Parties shall cooperate with RCWD in obtaining any such approvals. To benefit both RCWD and water users in Madera County generally, the Parties further agree to facilitate water transfers from outside Madera County to RCWD or other water purveying entities. The Parties agree that RCWD shall pay all delivery costs for water delivered to RCWD or for its benefit, including reasonable temporary regulation, storage or wheeling charges. The Parties agree that they shall jointly pursue all approvals necessary for delivery of such water to RCWD. The cost of those approvals shall be solely borne by RCWD. The Parties further agree to facilitate RCWD's efforts to obtain water transfers from Central Valley Project ("CVP") water service or exchange contractors pursuant to the Central Valley Project Improvement Act, or from Madera County or other M&I contractors who are not parties to this Agreement.

2. Purchase of Surface Water/First Option. RCWD intends to purchase additional surface water to supplement San Joaquin River water made available pursuant to the terms of this Agreement and supplies available within the boundaries of RCWD. RCWD agrees that before purchasing supplemental water from other sources, it shall satisfy its needs from supplies available for sale by MID, to the extent and on the same terms and conditions that MID is willing to sell such water to parties other than Friant Contractors or other CVP contractors. In consideration of RCWD's commitment to look first to MID for purchase of supplemental water, MID hereby agrees that RCWD shall have the first right to purchase any MID surface water that is available for sale outside its district

(except water sold to other Friant Contractors or other CVP contractors) to the extent and on the same terms and conditions that MID is willing to sell such water to parties other than Friant Contractors or other CVP contractors; provided, that RCWD's right pursuant to this paragraph shall not be interpreted as senior to or otherwise interfering with MID's ability to exchange water with other Friant Contractors to assist in delivery, timing and water management of MID water supplies. Nothing contained in this Agreement shall require MID to take any actions contrary to its bylaws or Friant Division operating policies or current water management arrangements.

3. Other Surface Water Supplies. MID agrees that RCWD shall be free to purchase surface water supplies from other members of the Authority or other sources so long as RCWD honors its commitment to purchase the MID water to the extent that it is reasonably available. The Parties acknowledge that RCWD desires to acquire long-term water supplies that originate outside Madera County. RCWD may seek to exchange any acquired supplies to augment supplies originating within Madera County. The Parties agree that (subject to the terms and conditions applicable to each supply) RCWD may utilize any long-term water supplies owned by RCWD or owned by any landowner (other than non-signing Holding Contract Owners) within RCWD, providing such use does not violate the terms and conditions of this Agreement, without violating RCWD's obligation to MID for surface water purchases.

4. Use of San Joaquin River for Conveyance. The District Parties agree that the San Joaquin River channel is a poor conveyance option due to the channel losses and other considerations and all District Parties prefer to utilize other options for delivery of water supplies to RCWD. The District Parties also acknowledge that the capacity of other conveyance options is limited and during some months no other options to convey

water to RCWD may be available. So long as this Agreement is in effect, all Parties agree to negotiate in good faith if RCWD believes it is necessary to utilize the San Joaquin River Channel for conveyance of water or to add or change points of diversion to facilitate the purposes of this Agreement.

ARTICLE IV

HOLDING CONTRACT SETTLEMENT

1. Settlement of Disputed Claims. The Parties agree that the purpose of this Article is to settle competing claims made by the Parties including, but not necessarily limited to, the following: (1) that the purposes of use of water under the Holding Contracts is limited to irrigation and domestic uses; (2) that the Holding Contracts describe land that is not entitled to water, and (3) that all land described in the Holding Contracts has a first right to all the water it can beneficially and reasonably use every year regardless of the total San Joaquin River flow. All Parties agree that litigation by a party interested in the flows of the San Joaquin River could resolve the disagreements among the Parties by defining the rights and obligations under the Holding Contracts. Because the Parties desire to resolve those disagreements without litigation and because all of the Parties to this Agreement have an interest in the flow of water in the San Joaquin River and may assert that they have a cause of action to enforce certain terms of the Holding Contracts, they have agreed to enter into this Agreement to specify an agreed upon water diversion schedule and other terms pursuant to the Holding Contracts within RCWD owned by Holding Contract Owners executing this Agreement. The intent of the Parties is that the agreements in this Article (that will sometimes be referred to as the "Holding Contract Settlement") shall survive any suit by any third party regardless of outcome. That is, the Parties intend this to be

a final and enforceable settlement of all claims by the Parties concerning any Holding Contract that is utilized by RCWD in accordance with this Agreement.

2. No Amendment/Agreement Not to Assert Claims. The Parties acknowledge that they do not have the right to amend or modify, and this Agreement will not be interpreted as amending or modifying, the terms of any Holding Contract, including any Holding Contract held by a Party. Based on the commitments of RCWD contained in this Agreement, all Parties hereby agree that, without waiving or modifying any rights that they may have under or pertaining to any Holding Contract, they shall not assert those rights with respect to any Holding Contract that is subject to this Agreement, and is managed by RCWD pursuant to the terms of this Agreement. (For the purposes of this paragraph only, the term "Agreed Holding Contract" shall refer to such a contract.) So long as (i) this Agreement is in full force and effect, (ii) all Agreed Holding Contract water delivered within RCWD is put to reasonable and beneficial use under California law, and (iii) RCWD and the owner of each Agreed Holding Contract comply with the terms of this Article and all other provisions of this Agreement, then (a) the District Parties and those Holding Contract Owners signing this Agreement agree that they shall not object to the management by RCWD of the water received under any Agreed Holding Contract or use of such Agreed Holding Contract water by RCWD for municipal and industrial purposes, (b) they shall not bring any action challenging such use on any basis, (c) they shall not cooperate in or assist in any action by any other party to challenge such use as being in violation of the Agreed Holding Contract, as creating adverse impacts different from those created by other users of water diverted at Friant Dam, or as failing to qualify as a reasonable and beneficial use of water merely because the water is used for municipal and industrial purposes, and (d)

they shall not assert that diversions, pursuant to an Agreed Holding Contract in accordance with the Holding Contract Delivery Schedule set out in Article IV, Paragraph 8, in and of themselves create adverse impacts on any existing water user. The Parties further do not waive, but agree not to assert while this Agreement is in full force and effect and all provisions of this Agreement are satisfied, any claims or assertions concerning the character of the lands described in the Agreed Holding Contracts as riparian or otherwise and assertions that significant portions of the land described in the Agreed Holding Contracts may not be entitled to water deliveries under such Agreed Holding Contracts. The Parties agree that during the continuance of a material breach of this Agreement by RCWD or an owner of an Agreed Holding Contract, they shall not be obligated by the terms of this paragraph. The Parties acknowledge that their agreement not to object, bring an action or assert any claim concerning RCWD's use of Agreed Holding Contract water supplies in accordance with the terms and conditions of this settlement shall not be construed as their opinion that all necessary legal _____ authorization has been obtained for the usage and terms contemplated by this Agreement.

3. Holding Contracts Within RCWD. There are four privately-owned Holding Contracts numbered 65, 67, 69 and 74 within the RCWD service area. In addition, Contract 72 was offered by the Bureau but has not yet been signed. Upon the execution of this Agreement by the owner of the claimed riparian parcel described by Holding Contract 72, such owner shall use its best efforts to cause the Bureau to execute and deliver Holding Contract 72 to such owner, whereupon such owner shall also execute it. Upon its full execution, Holding Contract 72 shall be deemed to be a Holding Contract for purposes of this Agreement. Until such Holding Contract 72 has

been fully executed, the claimed riparian parcel described by offered Holding Contract 72 shall be treated the same as the land described in the Holding Contracts within RCWD that have been executed.

4. Agricultural Use of Holding Contract Water. Certain of the Holding Contract Owners currently divert water from the San Joaquin for agricultural use within the boundaries specified in those Holding Contracts. Agricultural irrigation may also occur in the future on other land within the boundaries specified in these Holding Contracts. So long as a particular Holding Contract (including groundwater supplies extracted from the lands described in that Holding Contract) has not been used to supply water for M&I or RCWD use, is not subject to the terms of this Agreement, and/or it has not been put under management of RCWD for district purposes, then, the Parties agree that the provisions of this Agreement shall not apply, and RCWD shall not receive any credit against its overdraft elimination commitment from any deep percolation resulting from such Holding Contract irrigation water supplies.

5. Management of Holding Contracts By RCWD for District Use. RCWD desires to utilize water from the Holding Contracts within RCWD as part of its total water supply strategy to ensure that reliable water service is available for the expected M&I development within RCWD without adverse impacts. RCWD shall only utilize water from a Holding Contract if the Holding Contract Owner signs this Agreement and that Contract is managed by RCWD subject to an exclusive management agreement with that Holding Contract Owner. The exclusive management contract shall provide that the Holding Contract Owner shall not retain any right to independently divert water pursuant to a Holding Contract managed by RCWD. RCWD and any Holding Contract Owners signing this Agreement agree that all

deliveries pursuant to any Holding Contract RCWD manages will be strictly controlled according to the terms of this Agreement. No water from any Holding Contract whose owner has executed this Agreement shall be used for M&I purposes unless the Holding Contract is managed by RCWD in accordance with this Section 5.

6. Full Disclosure of Water Supplies. RCWD shall meter its water diversions and make its water supply and the sources of those waters, including any water used for groundwater recharge, public record so that any of the other parties to this Agreement can confirm that the amount of water obtained pursuant to Holding Contract rights and the use of that water remains in accord with the limitations specified in this Agreement. RCWD shall furnish to the District Parties on a quarterly basis a summary of certified diversion metering records, intentional groundwater recharge, in lieu recharge, usage within RCWD by type, and other pertinent information on all RCWD water supplies and all water usage within RCWD. The District Parties shall be given access to properties within RCWD to verify diversions, recharge and water uses.

7. Agreement Not to Object to Changes in Place of Use and Point of Diversion Under the Holding Contracts. The terms of the Holding Contracts do not specify a quantitative limit on the amount of water that can be diverted pursuant to each contract. The terms of the Holding Contracts only specify a limited area for diversion and limit use of water to the land described in each contract. The Parties agree that the imprecise approach to diversions specified in the Holding Contracts makes planning difficult for the Authority, MID and CWD and leads to the dispute the Parties desire to resolve with this Agreement. The restrictions on diversion points and place of use of Holding Contract water makes water budgeting and distribution within RCWD for M&I uses unfeasible. Strictly for Holding Contracts whose owners have executed this

Agreement the Parties hereby agree, without waiving any rights or claims, and subject to Article III, Paragraph 4 not to assert point of diversion, purpose of use and place of use restrictions under the Holding Contracts in exchange for the commitments of the Parties under this Agreement and the schedule of diversions pursuant to each Holding Contract set out in the following paragraph.

8. Holding Contract Diversion Schedule. RCWD and the signing Holding Contract Owners voluntarily agree to limit their diversion of surface San Joaquin River water pursuant to each Holding Contract when such water or any ground water underlying such holding Contract land is first used for M & I purposes as follows:

a. In a water year with total projected San Joaquin River deliveries greater than 1,466,000 acre feet (above average deliveries), 2.0 acre feet per acre described in each Holding Contract managed by RCWD.

b. In a water year with total projected San Joaquin River deliveries of 1,466,000 acre feet or less (below average deliveries) diversion of Holding Contract water by RCWD shall be reduced to 1.5 acre-feet per acre described in each Holding Contract managed by RCWD.

c. In a water year with total projected San Joaquin River deliveries of 800,000 acre feet or less (critically dry) diversion of Holding Contract water by RCWD shall be reduced to 0.5 acre-feet per acre described in each Holding Contract managed by RCWD; and

d. There shall be no limitation on RCWD use of flood flows and any RCWD flood flow diversions shall not be considered Holding Contract water counted against the applicable annual limitations.

For the purpose of measuring diversions pursuant to this paragraph, RCWD shall be subject to the same water year forecasting and allocation schedule applicable to water service contractors within the Friant Division as that system operates and is amended from time to time. The Parties agree that they shall be bound by this water diversion formula only for so long as this Agreement is in effect.

9. Holding Contract Diversion Points. RCWD's use of Holding Contract water for M&I use requires that it have coordinated extraction and distribution facilities to utilize in its district wide supply. RCWD intends to extract Holding Contract water, for direct and in lieu groundwater recharge, M&I and other district purposes only, from any point along the main stem or underflow of the San Joaquin River accessible to RCWD. The remaining Parties agree that they, while not waiving any rights or claims, will not object to any such diversion by RCWD as long as RCWD and the participating Holding Contract Owners comply with both the quantity and area of use limitations specified by this Agreement, and other commitments in this Agreement.

10. Holding Contract Water Distribution. RCWD agrees that, subject to Bureau approval if required, any Holding Contract water obtained by RCWD will be introduced into the general RCWD distribution system with all other RCWD water and will be utilized for M&I uses through direct and in lieu groundwater recharge on lands throughout RCWD but will not be exported to lands that are outside RCWD except to the extent that occurs as an incidental part of an integrated regional groundwater recharge program in the RCWD area. The remaining Parties agree, without waiving any rights or claims, that they will not object to the expansion of place of use to all of RCWD of water diverted pursuant to Holding Contracts subject to this Agreement so

long as RCWD and the participating Holding Contract Owners comply with the quantity and place of use limitations specified by this Agreement.

11. Holding Contract Modification. The Parties agree to support RCWD in requesting that the Bureau of Reclamation modify any Holding Contract obtained by RCWD whose owner has executed this Agreement, provided both the quantity and area of use limitations specified by Article IV of this Agreement are incorporated into such modified Holding Contract. The owners of Holding Contracts executing this Agreement shall use their good faith best efforts to assist RCWD in obtaining such modifications. Any proposed modification of a Holding Contract shall be consistent with this Agreement and the Parties shall be provided an opportunity to review the proposed Holding Contract modification to ensure compliance with this Agreement. Following execution of a Holding Contract modification that incorporates the terms of this Holding Contract Settlement, all Parties waive all prior claims that they may have concerning that Holding Contract.

12. Definition of Holding Contract Settlement. Whenever the term "Holding Contract Settlement" is used in this Agreement, or in any consent to this Agreement it shall refer to all terms and conditions of this Article.

ARTICLE V

IMPLEMENTING AGREEMENTS

1. General. The Parties agree that additional agreements will be necessary to fully implement all aspects of this Agreement. The Parties agree to negotiate in good faith to reach all necessary subsequent agreements, including, but not limited to, those specified in this Article V.

2. Underground Banking In MID and CWD. The Parties acknowledge that MID and CWD may have excellent conditions within their boundaries for banking surface water in the underground. RCWD, MID and CWD agree to consider groundwater banking and recovery arrangements within MID and CWD. The Parties desire that arrangements between RCWD and MID and/or CWD be the preferred off-site banking utilized by RCWD within Madera County. RCWD agrees not to bank water elsewhere in Madera County unless approved by MID and CWD, but RCWD shall have the freedom to utilize the ability to enhance delivery timing or other advantages that other off-site banking opportunities may offer. Notwithstanding anything else in this Agreement, the Parties agree that RCWD shall not be required to negotiate or enter into any other banking or water storage agreements with any other District until RCWD fully develops the groundwater banking potential in and around RCWD.

3. Additional Underground Banking. To the extent that RCWD desires to bank additional surface water in the underground to provide for a firm annual agricultural and M&I supply, to maximize available surface water delivery options or for other purposes, RCWD and the Authority agree to work together and with Friant Contractors to develop underground banking and exchange programs within districts constituting the Authority. The availability, terms and conditions for any programs will be negotiated by the particular parties.

4. Conveyance Facility. The Parties acknowledge that RCWD currently does not have adequate facilities for delivery of surface water to meet its objectives. The most convenient way to deliver surface water to RCWD is through the Madera Canal and MID lateral 6.2. MID and RCWD shall negotiate in good faith on an agreement to be executed 18 months from the effective date of this Agreement to

obtain a replacement easement and construct a facility to convey water to RCWD from MID's Lateral 6.2. The facility will be financed pursuant to the terms of such agreement.

5. Warren Act Water Conveyance Charges. RCWD and MID and the Madera-Chowchilla Water and Power Authority shall negotiate in good faith to reach agreement on conveyance charges applicable to water delivered to RCWD through the Madera Canal and the MID lateral system. The availability of conveyance capacity, terms and conditions will be negotiated by the affected Parties. The conveyance rates shall not include any component for use of the easement or the pipeline connecting the existing MID laterals to the RCWD facilities, as RCWD will pay its pro rata capital operation and maintenance costs pursuant to separate facilities agreements. MID and the Madera-Chowchilla Power Authority agree to sign an agreement with RCWD on conveyance charges on or before 18 months from the effective date of this Agreement, subject to compliance with applicable environmental laws.

6. Effect of Failure to Reach Agreement. Failure to reach agreement on any of the implementing agreements shall not void or in any way modify, suspend or diminish the settlement concerning Holding Contracts or the commitments of the Parties to assist RCWD in obtaining surface water supplies. Should MID and RCWD fail to reach agreement on conveyance facilities however, RCWD shall be released from any obligation to utilize groundwater banking within MID or to purchase surface water from MID, and RCWD's obligation to eliminate its contribution to groundwater overdraft shall be deferred as provided in Article II Section 5.

ARTICLE VI

GENERAL PROVISIONS

1. Participation Within Madera County Groundwater Control (AB 3030 Plan). RCWD hereby agrees to participate with Madera County and the other interested water purveyors in Madera County to develop a groundwater management program for Southeastern Madera County. In making this agreement, RCWD acknowledges that the groundwater levels within the RCWD boundaries have been in a gradual state of decline over many years and that a fundamental purpose of RCWD is, to the extent reasonably feasible, to restore the groundwater within RCWD to a level consistent with overall water needs within RCWD and Southeastern Madera County.

2. Limitation on Water Transfers From RCWD. RCWD voluntarily agrees that as consideration for the cooperation of the other Parties in facilitating RCWD's acquisition of surface and Holding Contract water, RCWD shall restrict the use of all water acquired by it to the RCWD boundaries as they exist from time to time. To accomplish effective groundwater recharge, however, RCWD may utilize facilities immediately up or down gradient from RCWD boundaries. The Parties agree however that this restriction shall not be interpreted to prevent water transfers and exchanges by RCWD in the ordinary course of managing water to ensure appropriate timing of deliveries and a reliable and consistent water supply.

3. Rules, Regulations and Rights of Non-Parties. The Parties acknowledge that this Agreement only binds the Parties and their successors and assigns. RCWD agrees to comply at its own expense with all applicable rules and regulations of the United States acting through the Department of the Interior, Bureau of Reclamation, the California State Water Resources Control Board and any other

applicable regulatory agencies. RCWD further acknowledges that the signatories are not making any representations concerning and cannot bind any other claimants to waters of the San Joaquin River. RCWD takes any and all risks that other claimants may object to the terms of this Agreement. Furthermore this Agreement shall not be interpreted as excepting RCWD from any environmental review process applicable to any specific proposal made by RCWD and shall not be interpreted as limiting the participation of any other Party in that review.

4. Enforcement of Agreement. If default shall be made by any party in any provision contained in this Agreement, such default shall not excuse the other Parties from fulfilling their obligations under the Agreement and such other Parties shall continue to be liable for the performance of all obligations herein contained. The Parties hereby declare that this Agreement is entered into for the benefit of all Parties to the Agreement and each Party shall have the right to enforce this Agreement by whatever lawful means that Party deems appropriate all of the obligations of each Party hereunder.

5. Recording. This Agreement shall be recorded in the Official Records of Madera County to bind the land within RCWD as described in Exhibit A to the extent legally permissible and to make an official record of the agreement of the Parties.

6. Best Efforts/No Guaranty. When this Agreement requires any party to assist, cooperate, negotiate, facilitate or otherwise participate in a process to obtain a mutually desired result described in this Agreement, all that is required of that party is that they exert their reasonable and appropriate best efforts in relation to the matter described in this Agreement. In agreeing to cooperate, assist, or negotiate in good

faith, no party is endeavoring to guaranty any result described or sought by this Agreement.

7. Waste and Unreasonable Use. Nothing in this Agreement is intended or shall be construed as condoning any waste or unreasonable use of water. All Parties specifically retain their rights and responsibilities as water purveyors to ensure that water within their jurisdiction is put to reasonable and beneficial use.

8. Specific Performance. The Parties acknowledge that both groundwater and surface water are unique and irreplaceable resources. Therefore, monetary compensation or other remedies at law will not be sufficient to cure a breach of this Agreement. The Parties agree that in addition to all remedies at law, specific performance shall be available to all Parties to enforce the terms of this Agreement.

9. Costs. The costs and expenses incurred for the preparation of this Agreement shall be paid by each party.

10. Time. Time is of the essence of this Agreement and each and all of its provisions.

11. Effect of Headings. The subject headings of the articles and paragraphs of this Agreement are included for purposes of convenience only and shall not affect the construction or interpretation of any of its provisions.

12. Entire Agreement. This Agreement constitutes the entire agreement between the Parties pertaining to the subject matter contained in it and supersedes all prior and contemporaneous agreements, representations, and understandings of the Parties. No supplement, modification, or amendment of this Agreement shall be binding unless executed in writing by all of the Parties hereto.

13. Waiver. Waiver of any breach of this Agreement by any party hereto shall not constitute a continuing waiver or a waiver of any breach of the same or another provision of this Agreement.

14. Counterparts. This Agreement may be executed in any number of counterparts and each such counterpart shall be deemed to be an original instrument, all of which together shall constitute one and the same instrument.

15. Binding Effect. This Agreement shall be binding upon and inure to the benefit of the heirs, executors, administrators, assigns, and successors of the Parties hereto, and shall bind and apply to all property subsequently annexed to RCWD or any other Party and shall be recorded against subsequent annexed land.

16. Survival of Agreement. The provisions of this Agreement and the covenants and conditions contained herein shall be continuous and shall survive any annexation or other change in the boundaries of RCWD and any transfer of ownership of any Holding Contract property or other property within RCWD.

17. Attorneys' Fees. Should any litigation be commenced between the Parties hereto concerning this Agreement, or the rights and duties of any party in relation thereto, the party prevailing in such litigation shall be entitled, in addition to such other relief as may be granted, to recover from the losing party a reasonable sum for its attorneys' and paraprofessionals' fees and costs in such litigation, or any other separate action brought for that purpose.

18. Governing Law. This Agreement shall be governed by the laws of the State of California.

19. Construction. All words used in this Agreement shall be construed to include the plural as well as the singular number and vice versa. Words used herein

in the present tense shall include the future as well as the present, and words used in the masculine gender shall include the feminine and neuter genders.

20. Parties in Interest. Nothing in this Agreement, whether expressed or implied, is intended to confer any rights or remedies on any persons other than the Parties hereto and their respective successors and assigns, nor is anything in this Agreement intended to relieve or discharge the obligation or liability of any third person to any party to this Agreement, nor shall any provision give any third person any right of subrogation or action over and against any party to this Agreement.

21. Notices. All notices and other communications required under this Agreement shall be in writing and shall be deemed to have been duly given on the date of service, if served personally on the person to whom notice is to be given, or on the third (3rd) day after mailing, if mailed to the party to whom notice is to be given by first class mail, registered or certified, postage-prepaid, and properly addressed as follows:

To Richard M. Moss, General Manager, at:
Friant Water Users Authority
854 North Harvard Avenue
Lindsay, CA 93247

To Stephen H. Ottemoeller, General Manager, at:
Madera Irrigation District
12152 Road 281/4
Madera, CA 93637-9199

To Douglas G. Welch, General Manager, at:
Chowchilla Water District
P.O. Box 905
Chowchilla, CA 93610

To Christopher L. Campbell, Counsel
Root Creek Water District
5260 N. Palm Ave., Suite 421
Fresno, CA 93704

To Holding Contract No. 65 at:

To Holding Contract No. 67 at:

To Holding Contract No. 69 at:

To Holding Contract No. 74 at:

S & J Ranch
P.O. Box 3347
Pinedale, CA 93650

To Offered Holding Contract No. 72 at:

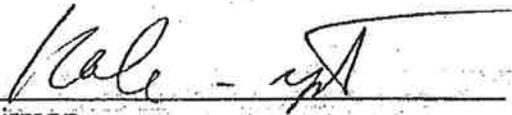
S & J Ranch
P.O. Box 3347
Pinedale, CA 93650

or at such other address as any party may, by like notice, designate to the other party in writing.

IN WITNESS WHEREOF, the Parties have executed this Agreement as of the day and year first above written.

FRIANT WATER USERS AUTHORITY

By



Chairman
Board of Directors

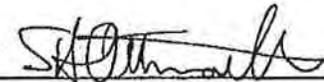
Attest:

By  _____
General Manager

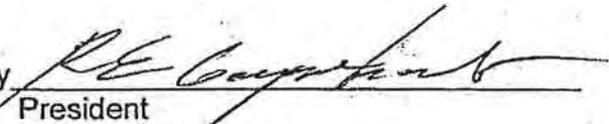
MADERA IRRIGATION DISTRICT

By  _____
President
Board of Directors

Attest:

By  _____
General Manager

CHOWCHILLA WATER DISTRICT

By  _____
President
Board of Directors

Attest:

By  _____
General Manager

ROOT CREEK WATER DISTRICT

By  _____
President
Board of Directors

Attest:

By _____
General Manager

HOLDING CONTRACT NO. 65

By _____
Owner

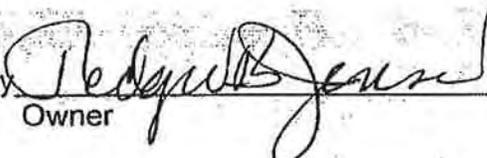
HOLDING CONTRACT NO. 67

By _____
Owner

HOLDING CONTRACT NO. 69

By _____
Owner

HOLDING CONTRACT NO. 74

By 
Owner

OFFERED HOLDING CONTRACT NO. 72

By 
Owner

::ODMA\GRPWISE\BMJDOM.FresDocs.PS4Lib:54036.1



List of Exhibits

EXHIBIT "A"

RCWD Legal Description

EXHIBIT "B"

M&I Consent to Be Bound

Appendix E

**Madera County Water Conservation Ordinance
Ordinance No. 532**

Title 13 WATER AND SEWERS

Chapter 13.55 WATER CONSERVATION

13.55.010 Purpose of regulations.

The board of supervisors of the county of Madera finds and declares that the state of California, including the county of Madera, is experiencing a drought and that conservation of water is a prudent and desirable goal necessary for the public health and safety. The board further finds that it is timely for the county of Madera to take those steps necessary for the public health and safety. The board further finds that it is timely for the county of Madera to take those steps necessary to ensure an adequate local supply of water, and that a water conservation program will assist in meeting that goal. (Ord. 532 § 1(part), 1990).

13.55.020 Rules and regulations.

The following water conservation program within that portion of the unincorporated area of the county which is served by county service area- or county maintenance district-operated community water systems is adopted as follows:

- A. No outdoor water use between twelve p.m. and five p.m. on any day.
- B. Dwellings or establishments with even number street addresses shall water only on Mondays, Wednesdays, and Fridays subject to the time restrictions set forth above.
- C. Dwellings or establishments with odd number street addresses shall water only on Tuesdays, Thursdays and Saturdays subject to the time restrictions set forth above.
- D. Anyone may water on Sundays subject to the time restrictions set forth above.
- E. Hosing down paved driveways, sidewalks, or paved parking lots is prohibited.
- F. Restaurants are encouraged to serve water only upon request.

These restrictions shall be in effect each year between May 1st and October 31st unless otherwise ordered by the board of supervisors. (Ord. 532 § 1(part), 1990).

13.55.025 Additional rules and regulations during periods of water shortage.

If the county engineer determines that the water conservation measures set forth in Section 13.55.020 are inadequate or are likely to be inadequate to prevent water shortages from occurring in a particular service area or maintenance district, the county engineer may, upon mailed notice to the residents of the service area or district, to their address of record with the county assessor, take any or all of the following additional temporary measures to protect the health and safety of the persons within the service area or district:

- A. Hot tubs and pools shall be filled only with water transported from outside the service area or district.
- B. Outdoor watering shall be prohibited during periods when signs are posted prohibiting outside watering.
- C. Outdoor watering shall be limited to the hours of nine to ten-thirty a.m. and eight-thirty to nine-thirty p.m.
- D. Residents whose addresses end in even numbers may water outside only on Tuesday and Friday. Residents whose addresses end in odd numbers may water outside only on Monday and Thursday.
- E. Cars may be washed only on those days and times during which the resident is permitted to water outside. Hoses must be fitted with an automatic shut off sprayer.

Madera County Water Conservation Ordinance Ordinance No. 532

F. Hosing down sidewalks, driveways, houses or paved areas is prohibited. Houses may be hosed down in conjunction with repainting activities when approved by the building official.

The mailed notice shall specify a date and time for hearing before the board of supervisors which shall be no more than twenty-one days following the date of mailing at which time the county engineer shall present evidence for the board to determine whether the emergency measures were necessary and whether they should continue. At the hearing, residents of the district or other interested persons may present evidence in favor of or in opposition to the emergency measures. At the conclusion of the hearing the board shall, by resolution, continue, modify or dissolve the temporary measures as it deems appropriate. (Ord. 532A § 1(part), 1995).

13.55.030 Exceptions.

Any provisions of this chapter shall not apply to prohibit agricultural, commercial or industrial use of water. (Ord. 532 § 1(part), 1990).

13.55.040 Violations.

Any person who shall violate the provisions of Section 13.55.020 of this chapter shall be guilty of an infraction and upon conviction thereof shall be punished by a fine of not more than one hundred dollars per violation per day. Any person who shall violate the temporary restrictions imposed by Section 13.55.025 prior to action by the board, shall after receipt of a written warning which may be personally served, mailed or posted on the residence be punished by a fine of not more than one hundred dollars per violation per day. (Ord. 532A § 1(part), 1995: Ord. 532 § 1(part), 1990).

EXHIBIT “B”

EXHIBIT "A"



Engineering
Surveying
Planning
Environmental
GIS
Construction Services
Hydrogeology
Consulting

286 W. Cromwell Avenue
Fresno, CA 93711-6162
Tel: (559) 449-2700 • Fax: (559) 449-2715
www.ppeng.com

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MEMORANDUM

To: Chris Campbell
From: David McGlasson, PE
Subject: Gunnar Ranch West Water Balance Analysis
Date: July 17, 2014

This memo documents the calculations we made on behalf of Root Creek Water District, analyzing the anticipated water use and water balance of the Gunner Ranch West Project (GRW).

We have been asked to prepare similar analyses in the past. Our original assignment in 2011 was to analyze the prospective water demand for GRW in the same manner as we had done for the Gateway Village Specific Plan and Water Supply Assessment in 2006 and 2007. Since that time we have refined the calculations to account for changes in project land use totals and in groundwater recharge assumptions. In 2013 we prepared a major update to our summary based on new State laws affecting both indoor and outdoor water use which have come into effect since 2011. What follows is a discussion of the current version of the two-page worksheet, dated July 17, 2014 and entitled Water Demand and Balance Calculations - Gunner Ranch West Development. A copy of that worksheet is included with this memo.

A. Table 2-1 Projected Residential Unit Water Demand Factors

Table 2-1 shows the water demand factors used in the GRW Infrastructure Master Plan (prepared by Boyle Engineering), the revised GRW Water Supply Assessment, and the most recent factors prepared by this office. Our numbers are based upon demand factors used for other infrastructure master plans that we have prepared for Valley developments and are originally drawn from actual water use experience from the City of Clovis. We have used Clovis as an established water system in a similar climate that is fully metered and so is reasonably comparable to new developments in the Valley.

Because of the requirement in the 2013 CalGreen Building Code that future buildings reduce indoor water use by 20%, we have reduced overall indoor demand projections by that same amount. There are specific limitations on plumbing fixture water use in the CalGreen code which make achievement of the 20% reduction goal attainable, so reducing demand projections is reasonable.

As well, we have reduced overall outdoor demand projections by 20% based on the outdoor watering limitations in the Model Water Efficient Landscape Ordinance legislation of 2009, which are expected to provide real reductions in observed outdoor water use in new developments as they come on line.

B. Table 2-3 Projected Water Demands (Build-Out Only)

Table 2-3 restates the demand projections which appear in Table 2-1, summarizing those demand factors in terms of acre-feet (AF) of water use per year. Table 2-3 contains important assumptions about which land uses will receive potable water and which will receive recycled water, which are based on the actual commitments made by the GRW project to date. If the project does not provide recycled water to the noted uses, overdraft will be greater than these calculations conclude.

The last line of Table 2-3 is the total consumptive water use according to each of the documents cited and our own calculations. These total demands are carried to Section D. of the worksheet, at the top of the second page.

C. Difference in Applied Water Demands (Build-Out Only)

This section of the worksheet provides subtotals of estimated water applied net of recharge, and is not an "apples-to-apples" comparison because of differences in the methodologies used in the three documents. The data presented in Sections D. and E. of the worksheet provide a more complete comparison and should be carefully reviewed.

D. Divisions of Water Balance

In this Section the differences between the approach and methodology used in each document become apparent. In parts 1 and 2 of this table, the P&P 2014 and GR IMP columns are blank in numerous rows which the GRW WSA uses to account for losses and "recharges" that P&P does not consider valid and so did not include. These include the assumption that 25% to 30% of all outdoor residential, parkway and landscape irrigation percolates and benefits the overall water balance. The percentages shown in black on these rows are from the 2009 WSA, while the percentages in red are from the revised 2012 WSA.

Part 3 of this Section calculates total inflow to the WWTP, less recycled water demand, less evaporation from the Effluent Storage Ponds, to arrive at the estimated quantity of treated effluent available to percolate to the groundwater. Note there is a full order of magnitude difference between the evaporation losses shown in the two GRW WSAs versus the P&P 2014 evaporation value.

The P&P 2014 evaporation total is based upon the given WWTP effluent pond acreage and standard evaporation values for the Madera area, assuming the pond is wet year-round, the most generous assumptions we can justify. We have no explanation as to how the WSAs arrived at values so much larger than these accepted standards.

Part 4 of this Table is the calculation of overall overdraft attributable to the project. The formula used for this is total consumptive use, less effective recharge, less aquifer safe yield (or "natural recharge.")

Both WSAs assume 100 percent of all possible recharge actually takes place effectively. We have been more conservative, given the complex geology underlying the project area and the dearth of detail provided for the project's proposed facilities. We have extensive borings in and near the project area, carried out for Root Creek Water District, which show the presence of intermittent clay lenses in the subsurface.

These lenses (or layers) of clay are irregularly interspersed throughout southeast Madera County, found at various depths from approximately five feet below ground surface to hundreds of feet deep, and varying in thickness from ten feet to nearly 100 feet depending upon the

specific instance. Because of their very low permeability, these lenses constitute a barrier to effective percolation from the surface to the groundwater aquifer. There have been a few areas in the area which have been determined to be relatively free of clay lenses and thus suited to groundwater recharge, including an area along Root Creek near Road 38, and an area near Avenue 12 and Road 38 that the County is working to develop. There may be areas of Gunnar Ranch West which prove suitable as well, but the geological work has not yet been done and the assumption that 100 percent of all the designated areas will provide effective recharge is unreasonably optimistic.

The different assumptions of recharge effectiveness create the large difference in line 4a, Percolation to Groundwater. This makes the bottom line overdraft very different as well, with the revised WSA actually predicting a small (140 AF per year) groundwater benefit from the project while we calculate an 833 AF annual overdraft.

In our opinion, there is no way for a development project to benefit the aquifer without bringing in water from outside of the area. This is the logical flaw in the WSAs. Every consumptive use of any kind takes water from the aquifer, and only a portion of that consumption can be returned through recharge. Any benefit from storm water falling on the project area is already occurring, and while the project may, if carefully designed, be able to maintain that benefit, it won't be increased. No matter the project there will be net water use. That use may be less than the natural "safe yield" within the area, but that is highly unlikely in Madera County where the safe pumping yield approximately 1.0 AF/acre. Mixed development water use in the region ranges as high as 3.0 AF/acre, while the most water-efficient recent proposals are just below 2.0 AF/acre, very near the net use we have calculated for GRW. The revised WSA concludes the project will use approximately 0.85 AF/year, which we believe to be unrealistically low.

While no one can predict with certainty the actual water consumption of the project, we are confident that our projections are appropriate as an initial target for the project's water recharge program. Given that the applicant will be required to do annual monitoring and adjust his recharge plan to provide the needed performance, we believe that level of confidence is an adequate starting point.



**Water Demand and Balance Calculations
Gunner Ranch West Development
Provost Pritchard Consulting Group**

July 18, 2014

Prepared: DMcG

A. Table 2-1 Projected Residential Unit Water Demand Factors

Residential Land Uses	Density (units/acre)	Demand (af/du/yr)			Demand (gal/du/day)		
		2009 GR IMP	2012 GR WSA	P&P 2014	2009 GR IMP	2012 GR WSA	P&P 2014
Very Low Density Residential	0.3 - 2.0	0.91	0.53	1.48	613	475	1323
Low Density Residential	1.0 - 7.0	0.71	0.53	0.64	634	475	574
Medium Density Residential	7.0 - 20.0	0.60	0.45	0.50	534	400	444
High Density Residential	12.0 - 25.0	0.43	0.30	0.29	382	267	260

B. Table 2-3 Projected Water Demands (Build-Out Only)

Land Use Designation	DU	Demand (AF/yr)		
		2009 GR WSA	2012 GR WSA	P&P 2014
Low Density				
Very Low Density Residential	174	148	92	258
Low Density Residential	1192	787	632	763
Medium Density Residential*	454	508	408	454
High Density				
Medium Density Residential*	453			
Mixed Use (HDR)	485	194	146	141
Medical Campus (HDR)	256	102	77	74
Residential Subtotal	3014	1739	1355	1689
CHCC Including Expansion				
Medical Office Building		5	5	5
Medical Campus Office				40
Medical Campus Flex Zone		88	79	88
Ronald McDonald House Expansion		3	3	3
Regional Commercial		148	139	270
Elementary Schools (2)		45	42	54
Parks (adjacent to elementary schools)		Recycled	Recycled	Recycled
Government Center / Fire Station		5	4	4
Park / Drainage Basin		Recycled	Recycled	Recycled
Sports Park / Drainage Basin		1	1	1
Recreation Centers		2	2	2
Mini Parks		Recycled	Recycled	Recycled
Central Green		Recycled	Recycled	Recycled
WWTP		12	12	Recycled
Street / Parkway Landscaping		Recycled	Recycled	Recycled
Non-Residential Subtotal		521	496	646
Total Demand =		2260	1851	2335
Unaccounted for Water (Residential) =		122	95	Incl
Unaccounted for Water (Non-Residential) =		37	35	Incl
Total Water Demand =		2419	1981	2335

*MDR Demand in both LDR and HDR zones accounted for in Low Density Residential Above

C. Difference in Applied Water Demands (Build-Out Only)

Land Use Designation	Demand (AF/yr)		
	2009 GR WSA	2012 GR WSA	P&P 2014
Total Water Demand =	2419	1981	2335
Less Amount of Potable Recharged (WSA Section 2.5.3):	316	225	0
Net Applied Potable Water =	2103	1756	2335



**Water Demand and Balance Calculations
Gunner Ranch West Development
Provost Pritchard Consulting Group**

D. Divisions of Water Balance

		2009	2012	2011	P&P
		GR WSA	GR WSA	GR IMP	2014
1.	Potable Water Demand				
	Total Water Demand	2,419	1,985	2,449	2,335
	WWTP Effluent	-1,365	-1,088	1,365	1,088
	Outdoor Irrigation with Potable Water	1,054	897		
	(70%) Evapotranspiration (71%)	739	637	Not Analyzed	Not Analyzed
	(4%) Wind Spray and Runoff	-	35		
	(30%) Percolate to Groundwater (25%)	315	225		
2.	Recycled Water Demand (Table 2-4)				P&P 2014
	Parks, Street landscaping, WWTP open space	278	217		245
	(70%) Evapotranspiration (71%)	195	154	Not Analyzed	-
	(4%) Wind Spray and Runoff	-	9		-
	(30%) Percolate to Groundwater (25%)	83	54		-
3.	Waste Water Effluent Use				P&P 2014
	WWTP Effluent	1,365	1,088		1,088
	Recycled Water Demand	278	217		216
	Evaporation from Percolation Ponds	20	20		213
	Groundwater Recharge - Deep Percolation	1,067	851		833 (3)
4.	Water Balance Summary				P&P 2014
	Total Groundwater Demand	2,419	1,985		2,335
4.a	Percolation to Groundwater	1,466	1,130		417 (2)
	Table 2-5 Estimated Consumptive Use	954	855		1,918
4.b	Annual Safe Aquifer Yield	1,025	995		1,085
	Difference (AF Overdraft is positive)	-71	-140		833

E. Effect upon Groundwater

	Demand (AF/yr)		P&P 2014
	GR WSA	GR WSA	
Total Groundwater Demand	2,419	1,985	2,335
Less Water Recharged	1,466	1,130	417 (2)(5)
Total Consumptive Use	954	855	1,918
Annual Safe Aquifer Yield	1,025	995	1,085
Difference (AF Overdraft is positive)	-71	-140	833 (4)
	(1)		(1)(2)

Notes:

- (1) Assumes full credit for percolation from effluent storage ponds
- (2) Assumes 50% of percolated water will reach groundwater aquifer
- (3) WWTP Effluent -- Evaporation + 12% of Parks, Street, Open Space Landscaping
- (4) Target Overdraft for GRW Groundwater Program
- (5) Recycled water accounted for in demand reduction in Table 2-3. Assumes all public open spaces, parks and street landscaping are irrigated with recycled water. If freshwater is used, additional water balance measures will be required.

EXHIBIT “C”

Memorandum

To: Jeffery M. Reid/ Michael Gunner

From: Tyler Hunt, PE/Richard Haberman, PE

Subject: Riverstone (formerly Gateway Village) Anti-Degradation Study and Associated Studies

Date: January 14, 2015

Jeff,

Per your request via letter dated December 19, 2014, AECOM reviewed the material provided in the DVD accompanying your letter which included the Anti-degradation Study and other material accompanying the Report of Waste Discharge, Riverstone WWTF dated June 2014. The Anti-degradation study confirms the differences between the Tentative Waste Discharge Requirements (WDRs) for the Root Creek Water District's Riverstone WWTF when compared to the proposed design as set forth in the Infrastructure Master Plan (IMP) included in the Gateway Village Environmental Impact Report (EIR) which was approved on 11 September 2007. The major deviations are noted in the table below followed by additional explanation of why the deviation should be considered significant:

Deviations	Gateway Village EIR	Riverstone WWTF WDRs Anti-Degradation Study
1. First phase treatment level	Secondary, disinfected (Appendix G, section VI, subsections B and C)	Secondary, undisinfected (page 2 of WDRs, paragraph 6)
2. First phase treated effluent disposal	Disposal to dedicated cropland (Appendix G, section VI, paragraph 1 and subsection B)	Disposal to percolation/evaporation ponds (page 2 of WDRs, paragraph 6 and Attachment B)
3. First phase treated effluent storage	Storage in lined ponds (Appendix G, section VI, subsection D)	Storage in percolation/evaporation ponds (page 2 of WDRs, paragraph 9)
4. First phase treatment process	Site plan includes chlorine contact tanks for disinfection (Appendix G, section VI, figure G-1)	Plant flow schematic does not include chlorine or any other disinfection process (Attachment B)
5. First phase biosolids processing	Class A, utilizing digestion or composting (Executive Summary, section VII, subsection F)	Class B, disposal by drying and hauling or hauling of wet sludge in bins (page 3 of WDRs, paragraph 12 and Attachment B)

- Deviation 1 The EIR states that the WWTF would produce a secondary disinfected effluent which is considered a higher level of treatment than secondary undisinfected. The disinfection step reduces pathogens which is safer for the public and allows for an increased variety of reclamation options. The WDRs propose that the WWTF will produce a secondary undisinfected which reduces the reclamation options and can present a public health issue.
- Deviation 2 The disposal of treated effluent to dedicated cropland as stated in the EIR is considered beneficial because the plants take up the nutrients in the effluent and minimize the potential for nutrient migration into the groundwater table. Also, use of the effluent as a supplement to regular irrigation reduces demand for surface and groundwater supplies.
- Deviation 3 The EIR states that the treated effluent will be stored in lined ponds when demand for irrigation water is minimal which provides a high level of protection for the groundwater. The WDRs have revised the storage method to percolation/evaporation ponds that provide no protection for the groundwater from harmful nutrients.
- Deviation 4 The WDRs delete the disinfection step that was included in the approved EIR. As stated above, the disinfection of the effluent is an important step in providing a safe, usable product for reclamation.
- Deviation 5 The EIR specifically states that all sludge will be processed and treated so that it may be classified as Class A, suitable for disposal with minimum restriction on use. The WDRs state the sludge may be dried and hauled, or alternatively, stored wet in bins and hauled off-site. These options will produce a sludge that is classified as Class B. Use of Class B sludge entails significant disposal restrictions while the storage and hauling of Class B sludge may present public health and nuisance issues.

Also included in the materials provided is a memorandum dated July 17, 2014 from David McGlasson to Chris Campbell that provides some direction on calculating water balances for development projects. In the memorandum, Mr. McGlasson points out that due to the unknown factors occurring underground, the proper course of action is to reduce a projects total estimated percolation to the aquifer by 50%. AECOM reviewed the water balances included in Appendix E of the Riverstone WWTF ROWD and found that the report includes a full, 100% credit of percolation to the aquifer. By applying the 50% reduction factor recommended by Mr. McGlasson, the following over estimations of aquifer recharge were noted in the water balance calculations for the Riverstone WWTF:

Project Phase	Volume of Effluent to Percolation per ROWD (ac-ft per year)	Calculated Percolation per ROWD (ac-ft per year)	Actual Percolation with Recommended 50% Reduction (ac-ft per year)	Calculated Percolation per ROWD (ac-ft per life of project phase)	Actual Percolation with Recommended 50% reduction (ac-ft per life of project phase)	Difference (ac-ft per life of project phase)
Initial Plant (10-yr life)	336	272	136	2,720	1,360	1,360
Ultimate Plant, Phase 1 (10-yr life)	403	326	163	3,264	1,632	1,632

Ultimate Plant, Phase 2	829	672	336	N/A	N/A	N/A
--------------------------------	-----	-----	-----	-----	-----	-----

Note: The above percolation rates ignore precipitation. The 19% evaporation rate was calculated from the water balance included in Appendix E of the Riverstone WWTP ROWD.

Please contact me if you have any questions regarding the above information.

Sincerely,



Tyler Hunt, PE



EXHIBIT “D”

BEFORE
THE BOARD OF SUPERVISORS
OF THE COUNTY OF MADERA
STATE OF CALIFORNIA

ORDINANCE NO. 627

AN ORDINANCE ADOPTING AN INFRASTRUCTURE MASTER PLAN
FOR THE GATEWAY VILLAGE AREA PLAN AND GATEWAY VILLAGE
SPECIFIC PLAN

The Board of Supervisors of the County of Madera, State of California, ordains
as follows:

RECITALS

1. The Gateway Village Infrastructure Plan is an integral component of the Gateway Village Area Plan and Gateway Village Specific Plan, the goals of which are:

- 1.01 To create a self-sustaining and environmentally sensitive community where energy use and waste will be reduced, air quality improved and economic efficiency increased.
- 1.02 To achieve a compact development that creates a sense of place and preserves land for permanent open space; encourages walking, the use of bicycles and public transit; provides affordable housing; is safe; and allows for cost-effective community services.
- 1.03 To provide a mix of uses including residential, commercial, office, industrial and recreation, to ensure social cohesion and a balance between jobs and workers.

2. The Gateway Village Infrastructure Master Plan sets forth preliminary design standards for infrastructure within the Gateway Village Area Plan boundaries and establishes design standards for future development.

3. The Infrastructure Master Plan provides the conceptual framework for developing and phasing infrastructure for the Gateway Village project and requires that the design policies and standards contained in the Infrastructure Master Plan be a guide for the Root Creek Water District, its successors and the County for conditioning land use entitlement applications.

4. Prior to adopting the Infrastructure Master Plan, the Board of Supervisors certified an environmental impact report for the Gateway Village project of which the Infrastructure Master Plan is a part (SCH 2005091071).

5. The Infrastructure Master Plan implements and is consistent with the County's General Plan and Gateway Village Area Plan.

NOW THEREFORE, the Board of Supervisors of the County of Madera State of California adopts the Gateway Village Infrastructure Master Plan dated September 2006, a copy of which is attached to this ordinance as Exhibit "A."

This ordinance shall take effect thirty (30) days after its adoption.

* * * * *

The foregoing Ordinance was adopted this 11th day of SEPTEMBER, 2007, by the following vote.

Supervisor Bigelow voted:	<u>yes</u>
Supervisor Moss voted:	<u>yes</u>
Supervisor Dominici voted:	<u>yes</u>
Supervisor Rodriguez voted:	<u>yes</u>
Supervisor Wheeler voted:	<u>yes</u>



[Signature]

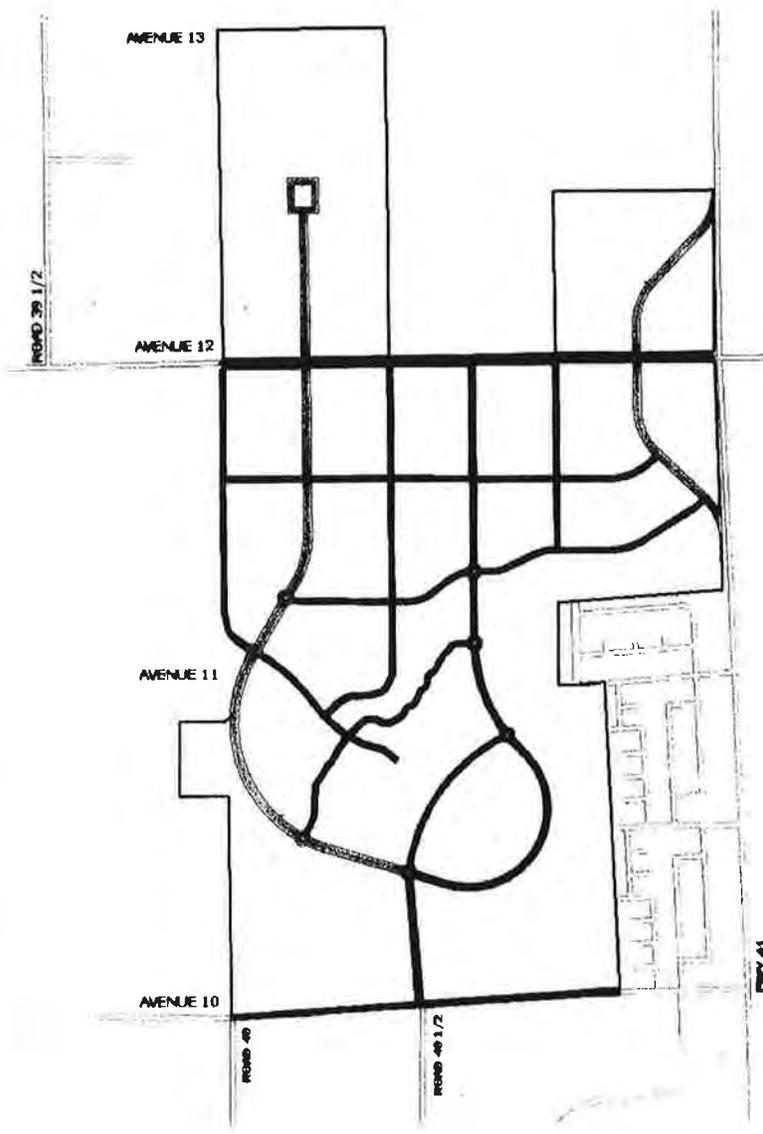
Chairman, Board of Supervisors

ATTEST:

[Signature]
Clerk, Board of Supervisors

Approved as to Legal form:
COUNTY COUNSEL

By [Signature]



Gateway Village

Infrastructure Master Plan

Castle & Cooke

September, 2006



286 West Cromwell Avenue
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I. EXECUTIVE SUMMARY

This Infrastructure Master Plan report (IMP) sets forth the master plan for infrastructure improvements to support the Gateway Village development in Madera County, to a level of detail sufficient to evaluate individual development proposals within the project area as they are brought forward. It describes each major infrastructure system and the design parameters required, and presents a schematic layout of all infrastructure facilities.

The development itself is described in the Gateway Village Area Plan, a general-plan-level document describing proposed project land uses and character. Additional project details, including proposed zoning, zoning regulations, design guidelines and development standards are set forth in the Gateway Village Specific Plan, which implements the Area Plan and provides the legislative foundation for the zoning and land use regulations necessary to implement the vision of the Area Plan.

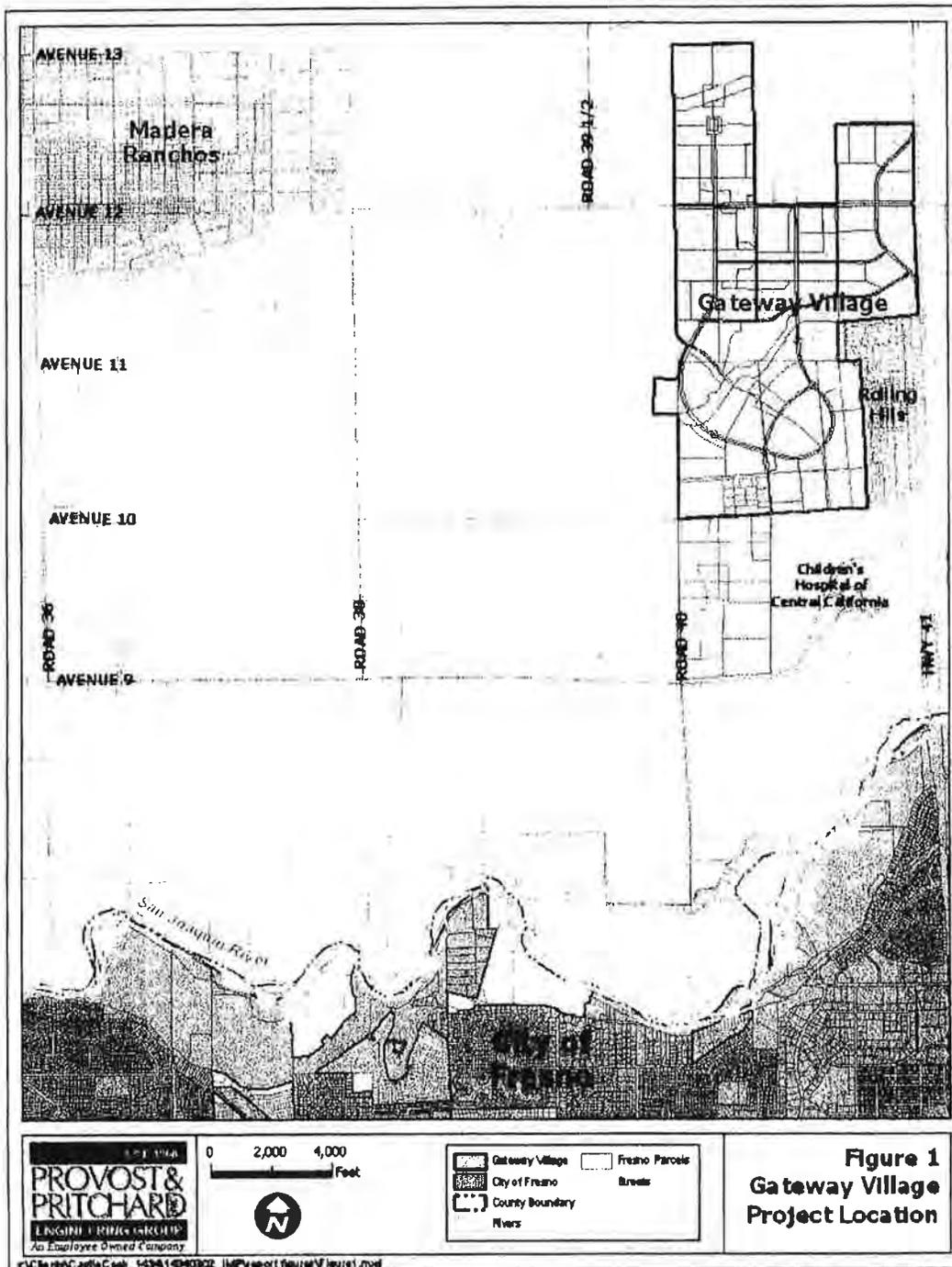
This Infrastructure Master Plan does for hard infrastructure what the Specific Plan does for zoning and land use. It sets forth preliminary designs for all the infrastructure within the Plan area, and sets design standards to be followed by future development, some of which vary from currently-adopted Madera County Standards. It does not contain complete design details for all necessary infrastructure, and is not to be treated as a construction document. Rather, the IMP is intended to serve as a conceptual framework; as an integral part of the Gateway Village Specific Plan. It is a coordinated plan for developing and phasing infrastructure for the project, and a guide to Root Creek Water District, its successors, and the County for conditioning land use entitlement applications. Future entitlement conditions shall conform to the design policies and standards set forth in the IMP.

The IMP is intended to be a living, evolving document, which may be amended from time to time as development plans are refined, and as estimated utility demands become more precisely quantified. Procedures for major and minor amendments are set forth within. The quantities, sizes, and capacities discussed in this report are conservative and have been estimated from the best available information, but are subject to revision as the project's detailed design evolves.

II. INTRODUCTION

A. Project Location

The Gateway Village plan area covers approximately 2,062 acres. Located in southeast Madera County, the site is generally bordered on the east by State Route 41 and the community of Rolling Hills, on the north by Avenues 12 and



12-1/2, on the south by Avenue 10 and on the west by Road 40. The project area is shown in **Figure 1**.

The site is approximately equidistant from the city of Madera and mid-town Fresno. Immediately south of the project area lies Children's Hospital of Central California and its surrounding medical offices. Four miles west on Avenue 12 is the community of Madera Ranchos.

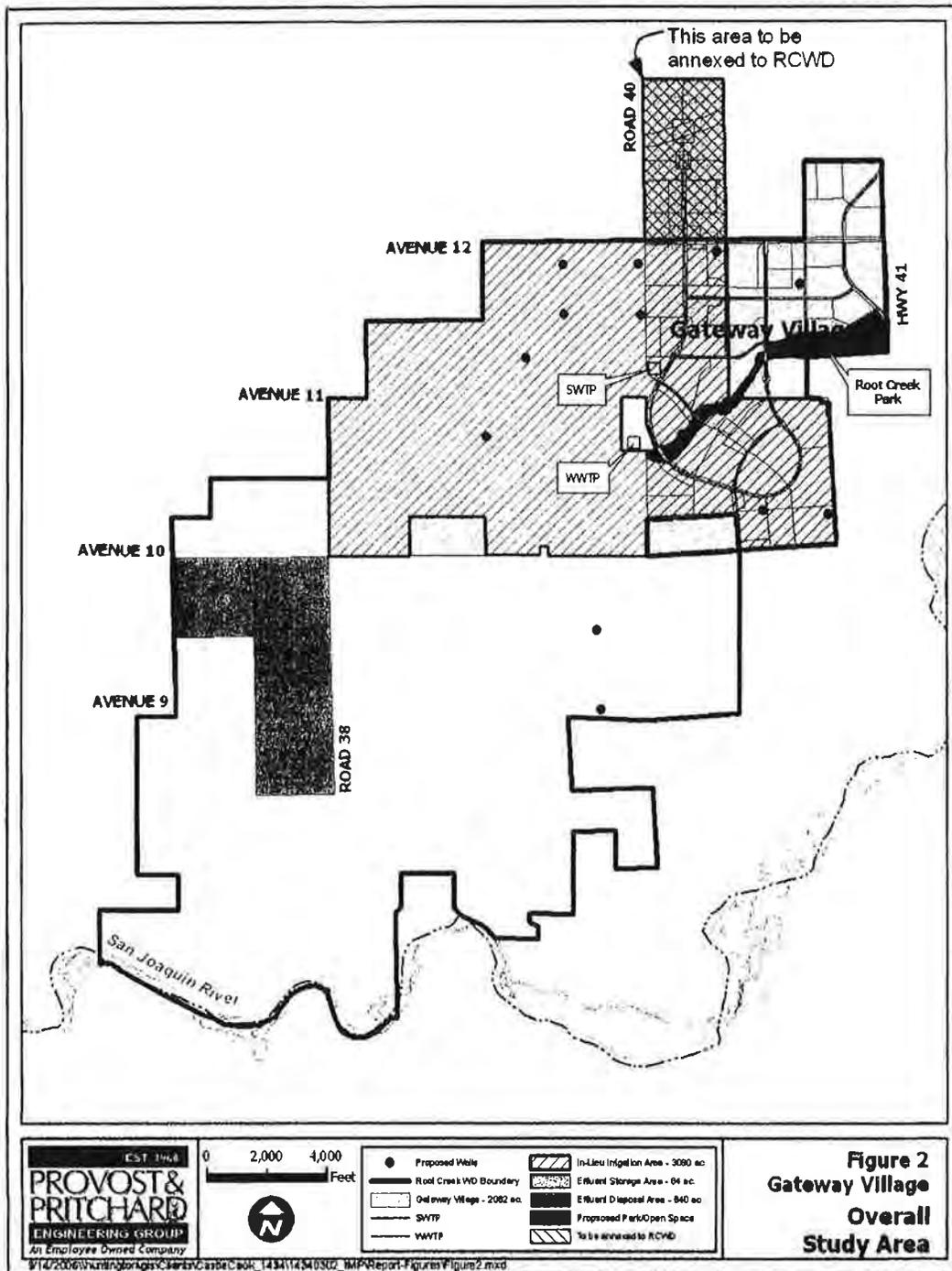
The site is generally flat, with large areas of gently rolling topography, and is roughly bisected by the Root Creek drainage, an ephemeral stream. No perennial streams flow through the property; however, other seasonal and ephemeral drainages tributary to Root Creek are visible on the topography map.

Certain infrastructure improvements related to Gateway Village will be constructed on lands outside of the Village boundary. These include improvements to State Route 41, domestic water wells, wastewater effluent storage and reclamation areas, direct groundwater recharge facilities, and an in-lieu groundwater recharge system. The overall study area is shown in **Figure 2**.

B. Infrastructure Master Plan Concept and Objectives

This Infrastructure Master Plan is intended to provide information about Gateway Village and set standards for future infrastructure improvements, thereby accomplishing several objectives.

- First, the IMP will provide information to those involved in the environmental review of the development, sufficient to assess the potential environmental impacts of the project and its various components.
- Second, the design standards within the IMP are intended to act as potential mitigation measures, so that any potential environmental impacts identified in the project EIR will be found to be mitigated to a level less than significant by the project's design.
- Third, the IMP and its design standards, together with the Gateway Village Area Plan and Gateway Village Specific Plan, will provide a framework for the County to use in its review of individual development proposals within the Specific Plan area, allowing approval of Tentative Maps and site developments within the various project phases and construction of required infrastructure in an efficient and cost-effective manner, while protecting the public health and safety.
- Fourth, the detail of the improvements set forth in the IMP will give the developer firm assurance regarding the work which will be required with each phase of the development, and will reduce uncertainty in planning future maps, site developments and phases.



To accomplish these objectives, this document analyses each infrastructure system required for the project, including potable water, wastewater treatment and disposal, storm drainage, streets and circulation, dry utilities, fire protection and public safety. Using industry-standard estimating techniques together with local area experience, demands for each utility are presented, standards for design and construction are set forth, and schematic designs for each utility system are included.

Each infrastructure system is planned for construction in phases along with the community itself, so that the project will not be burdened with construction of improvements not needed until later. Demand triggers, based upon population, constructed units or other measurable criteria, are included to allow objective evaluation of specific development proposals as they are brought forward.

C. Authority

Design criteria for each utility are included in this IMP, and are intended to govern the design of all development within the project. The Specific Plan incorporates further design standards for roadways, landscaping, street lights, street furniture and other visible improvements, assuring that the development will have a consistent visual appearance throughout what is planned to be a number of phases developed over many years.

Design criteria and standards set forth in this IMP and the Specific Plan supercede similar criteria and standards contained in the Madera County Standard Specifications, for all construction within the Gateway Village Specific Plan area.

D. Environmental Impact Reduction

To reduce the impacts of project-related construction upon the surrounding area, the following policies shall govern all work on infrastructure facilities and other construction activities in Gateway Village:

- Hours of construction shall be limited to between 7:00 a.m. and 6:00 p.m. on weekdays, and from 8:00 a.m. to 5:00 p.m. on weekends. These hours shall apply to all construction activities, including backbone infrastructure, in-tract improvements, and building trades.
- Construction equipment noise shall be limited by muffling and shielding intakes and exhaust on construction equipment in accordance with manufacturer's specification, and by shrouding or shielding impact tools. The developer and the jurisdictional agency (Madera County, Root Creek Water District and/or a future Special District) shall have on-going responsibility to implement these provisions.

- Construction staging areas shall be located as far from noise-sensitive uses as possible. Construction staging areas shall be proposed by the contractor for each of the various contracts that may be let over the course of the project. The location of the staging area will be subject to the approval of the developer and the County Planning department.
- Prior to all construction, the developer shall have prepared geotechnical engineering studies to determine the potential of the site for seismically induced liquefaction and settlement. The geotechnical engineer shall make appropriate recommendations to mitigate such settlement to acceptable levels, and all such recommendations shall be incorporated into subsequent construction drawings and specifications as appropriate.

III. ROOT CREEK WATER DISTRICT

A. General

Nearly the entire Gateway Village lies within Root Creek Water District, a California Water District formed in 1996, which will be the potable water purveyor and will provide wastewater collection and treatment services for the project. The District boundary is shown on **Figure 3**. (Those portions of the Village lying outside the current RCWD boundaries will be annexed into the District after approval of development entitlements.) Virtually all lands within RCWD are now in agricultural uses.

RCWD does not currently have the facilities required to produce or distribute potable water or collect and treat wastewater or storm drainage. However, it has the authority under State law to assume those responsibilities and to construct or acquire the necessary infrastructure. The District has indicated its willingness to provide water, wastewater and storm drainage service to Gateway Village.

In order to make the transition from agricultural water supplier to urban utility, RCWD will first develop sources of groundwater for domestic use by constructing wells both within the project boundaries and on adjacent lands within RCWD, in areas where hydrogeology studies indicate the most favorable groundwater conditions. These generally lie in the northwest area of the project, southeast of Road 40 and Avenue 12, and outside the project boundaries to the south and west. See **Appendix E**. Water storage, pumping and transmission facilities will be designed and constructed by the developer as part of the project, and will be dedicated to the District for its ownership, operation and maintenance.

At the same time, the District will construct (or have the project developer construct) wastewater collection, treatment and disposal facilities as detailed below. Storm drainage collection, treatment and disposal facilities will be an

integral part of each project neighborhood, and are discussed in more detail in subsequent sections.

Additional capital facilities will be constructed by the project developer as development proceeds. Financing mechanisms may include private capital, commercial loans, assessment district proceedings, or Mello-Roos special district financing. Final decisions about financing methodology will be made at a later time.

The majority of the project area is now in cultivated, irrigated, agriculture. Of the project's 2,062 acres, roughly 1,900 are planted in citrus, pistachio, and olive orchards. The balance of the land is a combination of existing commercial and industrial uses and the Root Creek channel. See **Figure 4**.

Root Creek Water District will be responsible for providing water and sewer service to other developing properties within RCWD, and certain facilities within Gateway Village may need to be resized to accommodate that growth. Where those provisions appear necessary, they are noted herein. Final determination of the sizes of those facilities, as well as cost share allocations, would be subject to the size of the other proposed development.

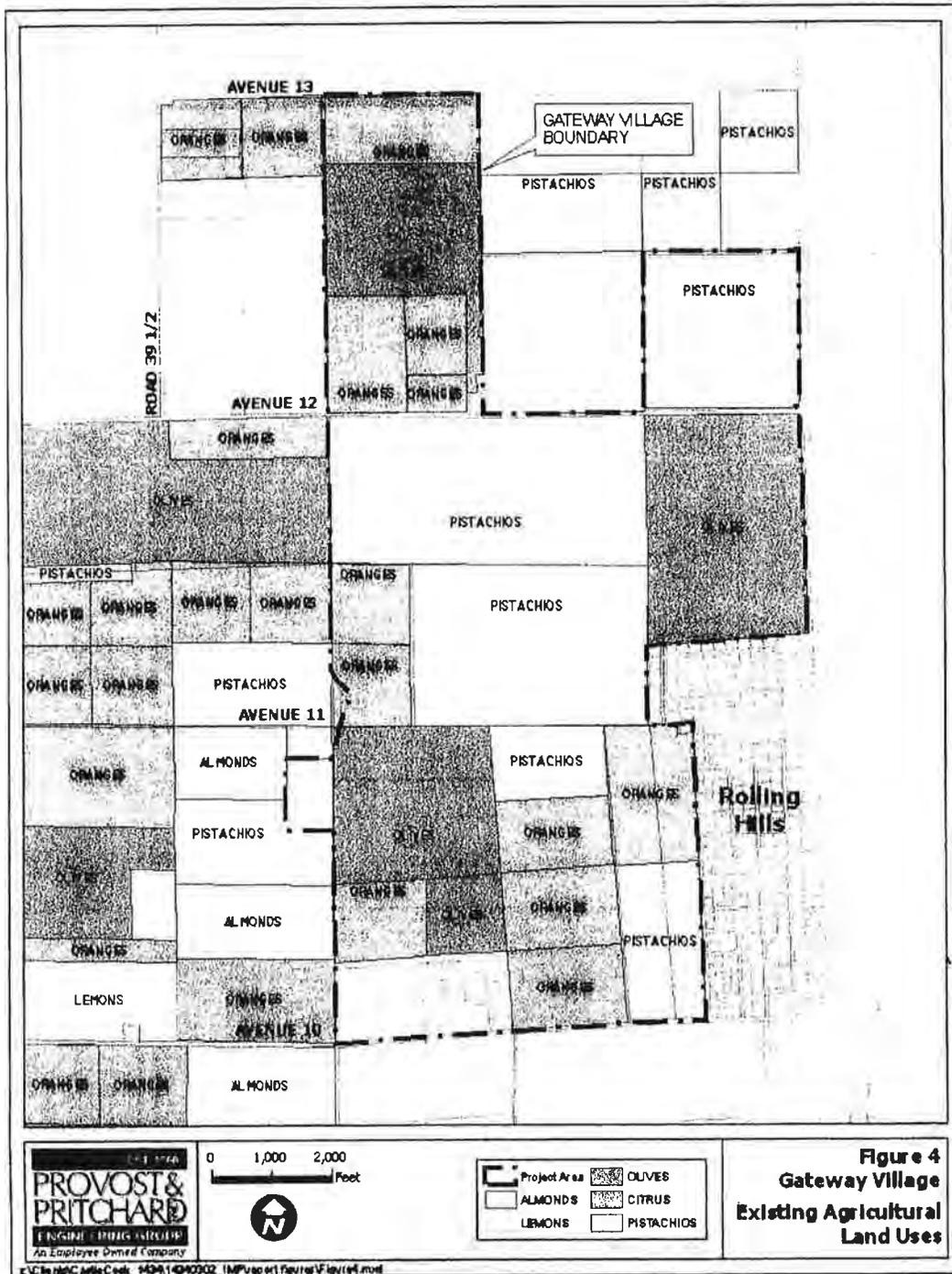
Similarly, certain developed areas adjacent to RCWD, in particular County Service Area No. 1 (SA-1) serving the Rolling Hills subdivision, might someday join with RCWD to provide water and/or sewer service within the SA-1 area. Provision of services to such adjacent areas would not be an obligation of RCWD, absent a petition from Rolling Hills and direction from LAFCo, however this IMP has analyzed the impact of such a connection and has summarized infrastructure upgrades required within Gateway Village to implement such an extension of RCWD's service area should that choice be made. This analysis is presented for the information of all involved, and is not a proposal of the applicant nor will it be a condition placed upon development of any phase of Gateway Village without official request for merger from Rolling Hills and approval of that request by LAFCo.

B. Phasing of District Responsibilities

In addition to serving as water purveyor, it is anticipated that Root Creek Water District will, under its organizational authority, initially serve as the public utility for sanitary sewerage and storm drainage disposal.

Once constructed by the developer, all water, sewer and drainage facilities will be acquired and operated by the District. As a subdivision of the State, the District has the authority to levy and collect fees for operations and maintenance of the various facilities under its charge. A pro-forma budget will be developed prior to start of initial construction, setting user charges for water and sewer, and Development Impact Fees for water, sewer and storm drainage for each of the land uses within the project.

The State Department of Health, Division of Drinking Water, will require preparation of a TMF (Technical, Managerial and Financial report detailing



RCWD's operational capabilities and financial standing, prior to approving operation of the water system. The developer will need to work closely with RCWD to assure that the District is provided with adequate resources at opening day to meet these critical requirements.

RCWD currently employs a limited number of operations staff, all of whom are geared to agricultural operations. This number would grow to accommodate the increasing demands of operating the Gateway Village infrastructure. Licensed operators would be required for domestic water treatment and distribution, and wastewater treatment and disposal. In lieu of hiring permanent staff, RCWD will consider contracting operations and maintenance to third-party firms, especially in early years when overall time demands are relatively light and full-time staff may not be cost-effective.

C. SB 610 and SB 221 Requirements

The Gateway Village meets the definition of a "project" under the provisions of SB 610 (Water Code Section 10910 et. seq.) and SB 221 (Government Code 66473.7, et. seq.) and so requires preparation of the two water supply reports mandated by these related pieces of legislation.

SB 610 Water Supply Assessment

SB 610, as codified in the Water Code, defines a "project" as any development of 500 or more dwelling units, and requires the water purveyor (in this case, the District) or the County itself to prepare a "Water Supply Assessment" prior to project approval. "Project approval" will mean approval of the Gateway Village Area Plan, Specific Plan and Infrastructure Master Plan and the associated Environmental Impact Report. In order for the project to be approved, the Water Supply Assessment must conclude that the supply of domestic water available to the development is adequate, and will be reliable over the next 20 years during normal, dry, and multiple-dry years.

Because Gateway Village will rely at first on groundwater supplies, the Water Supply Assessment must take into account the reliability of the groundwater aquifer and the local groundwater trends. As is discussed in detail below, the local aquifer has been in decline for many years. RCWD will not be able to certify a water supply assessment based upon a declining water table, unless there is assurance of a secondary water supply, available to supplement or even replace the groundwater supply, should it become necessary at any point in that 20-year verification time frame. Such a water supply has been secured. Details of the water supply and the water balance achieved are discussed in the Water Supply section, below.

The SB 610 Water Supply Assessment has been prepared and approved by the Root Creek Water District Board of Directors. The WSA concludes the water supply proposed for the project will be reliable over the required 20-year planning

horizon, under the circumstances required by the SB 610 law as set forth in State Water Code, Sections 10910, et seq.

SB 221 Verification of Water Supply

SB 221 defines a "project" as 200 or more dwelling units, and requires that a "Verification of Water Supply" be prepared by the District or the County. The primary difference between the requirements for this report and for an SB 610 Water Supply Assessment is that this report must be made at the time approval is sought for a Tentative Map for any phase of the project.

The Water Supply Assessment adopted by Root Creek Water District has been prepared to comply with the requirements of SB 221 as well, and will serve as the Water Supply Verification for the development.

D. Environmental Impact Reduction

In addition to providing a water supply that RCWD finds to be reliable in accordance with the requirements of the State Water Code, the project will construct and turn over to the District to operate facilities that will eliminate the existing overdraft within the Root Creek Water District boundary, in accordance with the agreement between RCWD, Madera Irrigation District, Chowchilla Water District, and the Friant Water Users Authority, in a manner which does not call for fallowing or permanent retirement of any agricultural lands within Madera County.

This requirement is addressed in this IMP by proposal of both direct and "in-lieu" groundwater recharge programs, which will make use of surface waters not currently available for use by domestic or agricultural customers within Madera County. Details are provided in subsequent sections below.

IV. OTHER SPECIAL DISTRICT FORMATION

A. General

Street lighting, park and landscape maintenance, and possibly fire protection services for Gateway Village will be provided under authority of a County Service Area (CSA), a Community Services District (CSD), or other similar special district with appropriate powers. The question of the form of special district best suited to this project remains open, and will be answered after continued discussions between the developer, County staff, and elected officials. The actual systems constructed and operated would not change due to the form of district governance chosen.

B. CSA 22

One option for these services would be to annex Gateway Village to the existing County Service Area 22, designating it as a separate zone of benefit. CSA 22 was created in the mid-90's to provide a finance mechanism for planning in the

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Rio Mesa Area, and has never provided urban services of any kind. Both Board of Supervisors and LAFCo action would be required to amend the CSA boundaries and verify the authority of the CSA to provide the necessary services. These actions would be initiated by the developer after project approval, and will need the consent of the County Board of Supervisors.

The Board of Supervisors would continue to act as the Board of Directors for the CSA, approving budgets for capital outlay, maintenance and operations, and setting fees for service and development impact.

Over the long term, it would be possible for the citizens of Gateway Village to petition to form a Community Services District to assume all of these same responsibilities, under the guidance and direction of a locally-elected board of directors.

C. New Community Services District

A second option would be to form a Community Services District prior to opening day, and have Gateway Village be self-governed with respect to these infrastructure systems. Starting with a self-governed form of district offers some challenges as opposed to the County-governed CSA.

Directors of a standard CSD are elected by the registered voters within the District, and must be registered voters within the district themselves. While this is a simple requirement in any urban area, currently no registered voters reside within Gateway Village. In a few cases, counties have been successful in getting the state legislature to approve special legislation authorizing the local Board of Supervisors to act as a board of directors for the district until the district reaches a specified population. In some cases this has been as high as 1,000 residents, or about 350 houses. This is one possible model for Gateway Village to emulate.

D. Sierra Foothills Public Utilities

A third option would be to annex Gateway Village to the existing Sierra Foothills Public Utilities District, designating it as a separate zone of benefit. SFPUD was created to serve the Avenue 12 Village portion of the Rio Mesa plan area, east of Highway 41 and north of the San Joaquin river. Since that project has not yet moved forward, SFPUD does not actively operate any utility facilities at this time. However, this self-governed district remains active and legally empowered to provide a full spectrum of public services other than law enforcement.

SFPUD has an independent Board of Directors in place, and in informal meetings has expressed a willingness to annex Gateway Village. Madera County's LAFCO Executive Officer, Dave Herb, has indicated that he would be more in favor of expanding an existing district such as SFPUD rather than seeing a new Community Services District created.

E. Other Options

For simplicity, this IMP refers to Root Creek Water District and any potential successor as "the District."

Other infrastructure facilities, including parks, open spaces and roads, may initially be maintained by the District through a Homeowners' Association created by the developer and funded through a combination of property owner assessments and developer contributions.

F. Public Safety

Public safety services will be provided through the Madera County Sheriff's Department. This service will be added incrementally as the project grows and demand for additional service appears.

V. WATER SUPPLY, TREATMENT AND DISTRIBUTION

A. General

The water supply for Gateway Village will be designed to provide a reliable and adequate volume of healthful, potable water, meeting all applicable regulations, for use by residential and commercial customers within the Village. This will be done without adverse impact to the surrounding groundwater aquifer, .

The project has committed to making up a volume of groundwater (3,400 acre-feet per year) equivalent to the currently-estimated groundwater overdraft within the Root Creek Water District. Methods for meeting these recharge commitments are detailed below and in subsequent sections of this IMP.

B. Municipal Water Supply

Municipal water for the first three to four phases of the project will be provided from groundwater wells located within the project area. Later phases of the Village may be served by groundwater wells located on adjacent lands, or by imported surface water treated at a plant located within Gateway Village. Both scenarios appear technically feasible at this time; a final decision will be made by the project developer as build-out proceeds and more is known about the relative availability and pricing of groundwater, peak flow surface supplies, and guaranteed-availability surface supplies.

Experience with existing agricultural wells within the project area has shown the availability of quantities of drinking-quality water beneath the project area. Hydrogeological investigations conducted as part of this IMP indicate suitable water strata, especially in the northwesterly part of the project area, which can be reasonably estimated to produce drinking-quality water between 80 and 100 percent of the total consumptive water supply required for the project. (See

Appendix E) More groundwater can be produced if wells are located outside of this targeted area, but data indicate a higher possibility of chemical concentrations requiring treatment of some kind (filtration, chemical reaction or both) prior to municipal use.

Because of this potential shortfall in quality groundwater, a surface water treatment plant (SWTP) will be considered for construction along Road 40 near the in-lieu irrigation supply pipeline, as subsequent phases of the project develop. The need for and precise timing of the SWTP will depend upon the quality and quantity of water obtained from the groundwater wells. The hydrogeological projections make it appear likely that there will be adequate quality groundwater to serve the area north of Root Creek and south of Avenue 12 (phases 1 and 2) and may be adequate for phase 3 (area north of Avenue 12). It is anticipated that a SWTP could be required by the early stages of Phase 4 (the first phase south of Root Creek.)

At completion, the project's water supply will be a combination of groundwater and treated surface water. The proportion of groundwater to treated surface water is not known at this time, nor is it important to either the environmental analysis or the Infrastructure Master Plan. This is true because the project's groundwater balance will be the same no matter the source of domestic water. Imported surface water will be used either to recharge groundwater aquifers or will be treated and used directly for municipal needs. The quantity of surface water imported will be the same in either case.

In later phases of construction, economics may drive a decision to construct additional groundwater wells in the areas south of the Village's boundaries, even though it is expected that water treatment may be required. Whether those later wells are constructed or not, the project will be constructed so as to meet its commitment to water balance and to provide the quantities and quality of water set forth in this IMP.

C. Water Quality

Experience with existing agricultural and nearby municipal water wells such as those in the Rolling Hills subdivision, together with the water quality testing done for this project, makes it clear that drinking-water-quality groundwater is in limited supply in the project area. Known water quality problems in the project area include elevated levels of manganese, arsenic, and Heterotrophic Plate Count (HPC) in water from some wells. See **Appendix F** for an extended discussion and complete test results.

According to the test results, a well in this area may have high HPC, high Manganese and/or Arsenic, or a combination of the three, depending upon its location and the depths from which it draws water. Manganese and Arsenic are

most often found together in the southerly part of the project area, at depths of 500 feet or more.

HPC is a measure of organic activity and has been related to a bacterial "slime" that occurs in parts of the project area, primarily in the upper aquifers. These wells are concentrated in a band that covers the central area of Gateway Village, running from northeast to southwest.

No wells are planned in the area where there is a high probability of finding HPC together with Manganese and Arsenic. Where neither contaminant is found, and the water is otherwise acceptable according to DHS standards, no wellhead treatment will be required other than the disinfection required of all groundwater sources by Federal rule.

HPC can be controlled by chlorination of the water produced. There can, however, be difficulties with HPC "blooms" in the depths of the well itself, which requires chlorination to be performed in the aquifer. This is difficult to do, though possible, and the situation is not optimal. Wells potentially high in HPC will be avoided as much as practical.

Manganese and Arsenic can each be removed from a well supply using properly-designed filtration systems. Filter systems will be installed on project wells as required to meet DHS drinking water standards. Detailed well and well-head treatment design is deferred to the time of individual project construction, so that wells can be designed based upon actual test wells rather than generalized test data.

D. Groundwater Basin

The southeast Madera County area shares a common groundwater basin. Groundwater within the basin flows generally from east to west, and from south to north, from a ridge adjacent to the San Joaquin River toward a low spot below the community of Madera Ranchos. Numerous studies have shown the basin to be in overdraft. Most recently, a hydrogeological study completed in 2001 by Dr. Ken Schmidt and Provost & Pritchard Engineering Group, Inc. concluded that the Root Creek Water District, which is a sub-area of the groundwater basin, has an annual groundwater deficit of approximately 3,400 acre-feet. The total overdraft in the groundwater basin is presumably greater than that, but is affected by water uses far beyond the boundaries of Gateway Village or the Root Creek Water District.

To help assure the reliability of the project's water supply, a groundwater recharge program will be instituted to replace 3,400 acre-feet of water on a 5-year rolling average basis within Root Creek Water District. The recharge program will include a combination of direct recharge via land application and in-lieu recharge, where imported surface water is provided to agricultural users to

use instead of the groundwater they would otherwise pump, leaving that water in the aquifer. See Section V below for further discussion.

E. Existing Water Supply Requirements

Based upon published agronomic uptake rates and existing cropping patterns as illustrated in **Figure 4**, current water use within the project area has been calculated to be approximately 6,450 AF annually. Actual usage cannot be measured due to the lack of meters on existing wells. Current use reflects an average consumptive demand of 3.2 acre-feet which is reasonably typical of similar agricultural areas.

F. Expected Water Supply Requirements

Expected water demand for the development will be a composite of the specific water demands for the various types of land uses proposed. These demands are summarized in Table 1.

In addition to the project demands, the IMP presents data to demonstrate sufficient water supply and distribution capacity to support residential development on the 348-acre parcel bounded by Avenue 9 and 10, and Roads 40 and 40-1/2. That land, located within RCWD, has not been entitled at this time. The Gateway Village Area Plan would leave the parcel surrounded on three sides by land entitled for urban development, making entitlement of the land seem logical. Prudence argues for providing future capacity to this area in the Gateway Village plan.

G. Project Water Conservation Features

The project will incorporate a number of water-conserving features and policies. Municipal water for the project (residential and commercial) will be metered, with a tiered rate system in place to discourage excessive consumption. Development of a specific rate system will be deferred until more precise capital and operating costs are known. However, rates will rise with increasing use above a baseline, favoring conservation without unnecessarily burdening low-use customers.

Overall water usage patterns for proposed land uses and densities are expected to be similar to those of other Valley communities which have implemented water metering together with tiered rates. Since the City of Fresno has not done so, it has not been used as a basis for comparison. The City of Clovis was used for comparison due to its similarity and proximity to Gateway Village, and the abundance of data available from that system. See Table 1.

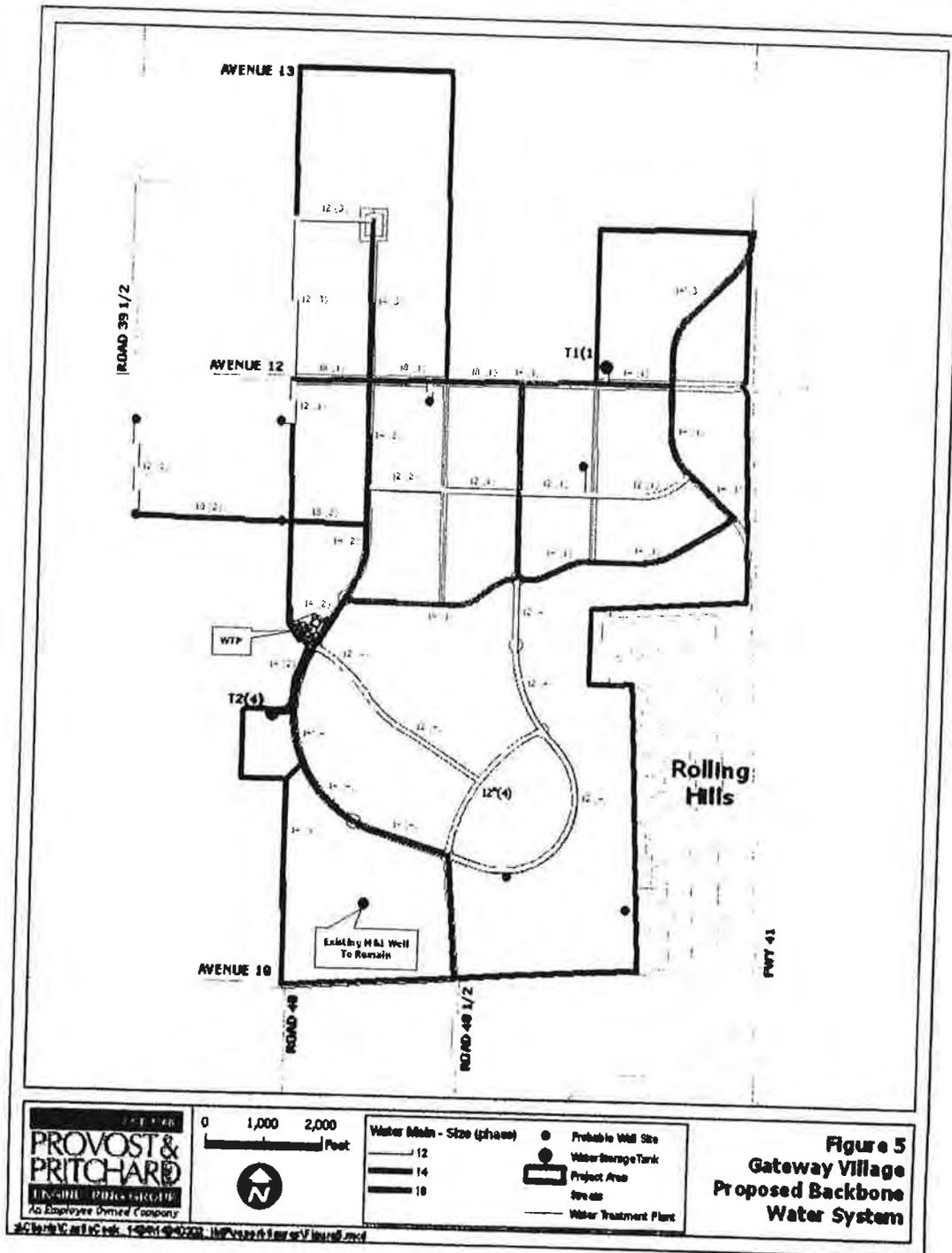


Table 1
Average Daily Demand (ADD) for Water By Land Use
(City of Clovis Information and General Plan Designations)

Land Use	ADD (gpm/ac)
Elementary School (ES)	2.56
Highway Commercial (HC)	0.76
Village Center	1.21
Employment Center (E)	1.36
Public (P)	1.21
Parks (PK) and Open Space (OS)	1.74

Zoning and land use classifications in Clovis are different than those proposed for Gateway Village. The 6578-unit limitation in the Village (the number of units proposed in the Area Plan) allows calculation of approximate average unit densities, which have been correlated with land use designations and used to select specific water use factors which are, presented in Table 2, below.

H. Water Supply System Redundancy

A fundamental criteria for municipal water supply is reliability. A key characteristic of supply reliability is redundancy of the supply facilities. Any facility may become subject to service or repair and may be forced out of production for a time. There must be margin within the overall system to allow for some percentage of the supply facilities to be out of service at any given time without compromising overall service delivery.

Table 2
Projected Average Daily Demand for Water By Residence Type and Lot Size

Land Use	ADD (gpm/du)
Lots 10,000 SF and larger	1500
Lots 6,000-10,000 SF	660
Lots less than 6,000 SF	660
Multi-family and attached	400

The criteria in Table 3 below shall be used to determine allowable utilization of municipal water wells. The objective is to create a system where any given water

well may be down for service or repair while the system continues to meet all planned demands.

Table 3
Permitted Utilization of Available Wells

Number of Wells	Allowable Utilization
1	50%
2	60%
3	66%
4 or more	75%

The contemplated surface water treatment plant may be utilized at up to 90% of design capacity. The surface water treatment plant, if implemented, must be designed to include multiple operating units, so as to limit the total production capacity taken off line when service or repair of any single unit is needed. Any combination of surface water treatment and groundwater supply must be sized and designed to meet consecutive Maximum Day demands utilizing the allowable percentage of available wells, and considering one treatment plant operating unit out of service.

To further enhance reliability, water wells and other critical supply facilities, including wellhead treatment equipment, must be equipped with internal-combustion-engine-driven backup power supplies. Fuel for these units will be selected based upon San Joaquin Valley Unified Air Pollution Control District criteria and regulations.

I. Water Conservation

Water conservation and reclamation will be emphasized in project design, in order to meet the water use goals stated in the Area Plan EIR and reduce groundwater overdraft attributable to the project. Water-conserving plumbing fixtures and conjunctive reuse of reclaimed water are principles central to the project design standards.

RCWD has not adopted any policies of its own concerning municipal water conservation. Should RCWD not adopt its own water conservation requirements prior to building occupancy, the project would be subject to Madera County's Water Conservation Ordinance No. 532 until such time as RCWD adopts its own ordinance or policies.

1. Reclaimed Water

Consideration will be given in project design for use of reclaimed water (treated, disinfected wastewater effluent) for irrigation of parks and publicly-maintained open spaces (trails, road medians, landscape easements) wherever practical and

economically feasible. This may mean that certain parks, medians, etc., are irrigated by reclaimed water while others are irrigated by the domestic supply or from agricultural wells converted for such use.

Irrigation of portions of the project using reclaimed water is to be just one of the tools employed to achieve conjunctive reuse of effluent and help maintain a balance of water supply and demand in the project area. Effluent not used for open-space irrigation within the project area will be used for irrigation within the designated Effluent Disposal Area. Groundwater that would have otherwise been used for that purpose, would then become available for use by the project's domestic water system, meaning the overall water balance would be the same in either case.

In the early phases of the project, quantities of effluent available for use as reclaimed water will be quite limited. Only as the number of completed dwelling units increases will the quantity of reclaimed water become large enough to irrigate major landscape areas within the project. Nothing in this IMP shall be construed as requiring use of reclaimed water for irrigation of any or all of the parks and open spaces within the project area, but all wastewater effluent shall be conjunctively reused within RCWD either as reclaimed water or for agricultural irrigation.

See **Appendix H** for further discussion, and **Appendix K** for a summary of water sources and uses.

J. Water Production and Distribution Standards

Municipal water production capacity (any combination of wells and surface water treatment facilities) must be adequate to meet consecutive Maximum Day Demands for the developed project area. Redundancy must be calculated in accordance with Section E, above.

Water distribution pumping capacity and redundancy must be adequate to meet Peak Hour flow demand (or Max Day plus fire flow, whichever is greater) with any single booster pump or well out of service.

Maximum Day, Peak Hour and Fire Flow demands shall be calculated in accordance with this IMP.

K. Water Storage

The water storage requirement includes three components: fire flow; peak demand; and contingency back-up. Water storage requirements will increase as the project progresses, with the general principles being that additional water supply redundancy reduces the requirement for back-up storage, and more-intensive land use increases the fire flow storage requirement.

1. Fire Flow Storage

Fire flow storage must be sufficient to provide 120 minutes of operation at the highest-required fire flow within the developed project area, while concurrently meeting the Maximum Day Demand of the project as developed at the time. This means that so long as the project remains a residential-only development, fire flow will be based upon 1,000 gpm. At such time as a commercial, industrial, or public school component is added, required fire flow will increase and so will required fire storage. The following **Table 4** summarizes minimum fire flows required for each land use type.

Table 4
Minimum Required Fire Flow by Land Use¹

Area Plan Land Use	Specific Plan Zone	Required Fire Flow (GPM)
LDR	GV-R	1,000, 1,500 ²
MUC, CC, NC	GV-C, GV-MU, GV-NC	2,500
School ³	N/A	2,500
LI	GV-HC	2,500 min ⁴

2. Peak Demand Storage

Many municipal water systems, including Gateway Village, are designed with the capacity to produce the Maximum Daily Demand on a sustainable basis over a number of days. This sustained capability makes it possible to meet the system's demand during a period of hot days, as typically experienced during the summer in the Valley. During the months of July, August and September, so many days are at or near "Maximum Day Demand" that attempting to get by on a lesser supply and meet the Maximum Day peaks from storage is not feasible. The supply source itself must have that capacity.

However, Maximum Daily Demand is the total water used in a 24-hour period, and does not represent the actual peak use during any day. Over the course of a Maximum Day, hourly use peaks and declines. The highest demands, referred

¹ These fire flows are minimums. Greater flows may be required at the time of project approval if the characteristics of a particular project so warrant, as determined by the requirements of the Uniform Fire Code in effect at the time

² Applies to GV-R zone if developed at 12 units/acre or greater, and to all attached housing developments.

³ There is no Area Plan designation or Specific Plan zone district for schools. Schools may be located anywhere within the GV-R district. This fire flow requirement would apply to any designated school site at the time of school construction.

⁴ Greater fire flow may be required depending upon the particular industry or enterprise being proposed. In many cases, higher fire flow requirements can be mitigated by internal fire sprinkling systems. Uniform Fire Code provisions will apply in calculating the required flow.

to as Peak Hour Demands, must be met by pumping from storage in addition to the sustained water supply. This storage, referred to as Peak Demand Storage, is refilled daily during lower-demand hours.

Peak Demand Storage must be adequate to supplement the sustained water supply capacity and meet Peak Hour Demand for a minimum of six hours per day.

Calculations demonstrating the need for Peak Demand Storage, and the required capacity thereof, shall be submitted with each application for subdivision improvement drawings, for approval by the District.

3. Contingency Back-Up Storage

Contingency back-up storage provides a measure of safety against the possibility that water production or treatment capacity might be reduced by equipment or power failure. Redundancy of water wells in accordance with this IMP and provision of back-up power supplies for each well limits the District's exposure to shortage due to such failures, but Back-Up Storage is still a prudent requirement.

Storage equivalent to 20 percent of Average Day Demand for the cumulatively-approved units shall be provided for this contingency.

4. Total Storage Requirement

The greater of fire flow storage and peak hour storage shall be added to contingency storage requirements to reach the total storage requirement. All storage volumes shall be net usable volume of the tanks or reservoirs proposed. For example, if a tank has a minimum operating level of 2.0 feet above grade, only the volume of the tank above that minimum level shall be allowed to count against the requirements.

Water tanks may be of welded steel or pre-stressed concrete construction. Bolted steel tanks will not be acceptable.

While it is beyond the scope of this IMP to fully specify the tank design, all structural details shall conform with applicable seismic and building codes. Painting and coating shall be in conformance with American Waterworks Association requirements for potable water. Complete design calculations and coating specifications shall be submitted to the District for approval prior to construction.

L. Water Distribution Requirements

The water transmission and distribution mains shown on the IMP Drawings have been sized to meet the water demands anticipated by the planned land uses shown in the Gateway Village Specific Plan. In particular, system pressure is assumed to be maintained at least 50 psi at each pumping point, and at a

minimum of 20 psi at any point in the system under Max Day/ Fire Flow conditions. Detailed water demand calculations appear in **Appendix A**.

All in-tract water facilities shall be designed at the time of subdivision approval, and shall be adequate to meet these pressure and fire flow requirements throughout each individual development.

Water mains shall be Class 150 PVC per AWWA C-900 and C-905 (for diameters 14 inches and greater; minimum acceptable pressure rating is 165 psi, which corresponds to a DR of 25) standards, or other such standard materials as may be acceptable to the District.

Water valves up to 12" shall be gate-type, resilient seat per AWWA C-509. Valves larger than 12" shall be butterfly type. Valves shall be installed not less frequently than every street intersection, and shall be configured to allow isolation of any given block for maintenance without shutting off water to the rest of the system.

Fire hydrants shall be dry barrel with 4-1/4 and 2-1/2-inch outlets or other such configuration as may be directed by the Fire Department, and shall all be of common manufacture, of a brand acceptable to the Fire Department. Hydrants shall be spaced at not more than 350 feet unless specifically approved by the Fire Department.

While the intent of the transmission/distribution system is to provide water flow adequate for all demands that might reasonably be imposed at full build-out of planned land uses, it is recognized that final development proposals may impose different water demands which could not be met by this planned backbone system. Should that become the case, it will be the responsibility of the developer of that phase or commercial area to provide for additional water supply, storage, pump capacity, or combination thereof adequate to meet the actual proposed demands while maintaining water balance. Such additional improvements will be subject to approval by the District prior to approval of the specific development proposal.

M. Groundwater Treatment Facilities

At minimum, groundwater used for municipal and industrial supply shall be disinfected in accordance with DHS requirements. All groundwater sources shall be tested for the presence of contaminants, against the primary and secondary drinking water standards. Additional treatment systems shall be designed and constructed as required to assure that all groundwater supplies are in conformance with those standards.

Wellhead filtration systems shall typically be modular micro-filtration units, acceptable to the Department of Health Services (DHS) for removal of the contaminants present in the given well.

Provisions shall be made for back-up power generation, with capacity sufficient to power the well pump, all treatment equipment and facilities, and any miscellaneous electrical loads found at the well site.

N. Surface Water Treatment Facility

Treatment at the Surface Water Treatment Plant will conform to the applicable DHS and EPA regulations in effect at the time of design and construction. Design details will be fully developed at that time. At present, it is believed likely that a membrane micro-filtration plant would be used rather than a granular media (sand) filter.

Back-up power generation shall be provided, adequate for full-capacity operation of the treatment plant and any distribution pumps located at the plant site. See **Appendix B**.

O. Phasing of Water System Improvements

Construction of water system facilities will be phased to meet the demands of the development as it comes on line. Each phase of the development or individual project within the Village must provide assurance of water supply and redundancy adequate to meet the standards set forth in this IMP, and provide facilities that are either expandable or are sized to provide for future phases of development.

In particular, water tanks, transmission and distribution mains shall be constructed using the required ultimate sizes and diameters as shown on the IMP Drawings, even when current phase demands do not warrant those sizes.

P. Additional Environmentally-Beneficial Project Features

Efficient irrigation systems will be employed in landscaped areas. These are defined as one or any combination of the following:

- Drip Irrigation
- Soil Moisture Sensors
- Automatic Irrigation Systems

Mulch will be employed to maintain soil moisture and reduce water-using weed growth, and native and drought resistant vegetation will be incorporated in landscape designs.

VI. GROUNDWATER RECHARGE

A. General

Most of the irrigation water within RCWD is currently supplied from groundwater wells, and the groundwater basin underlying the project area is known to be in overdraft. Within RCWD, the deficit was calculated in 2001 to be approximately 3,400 AF/year. It is incumbent upon the project to demonstrate satisfactory mitigation for its use of groundwater.

As partial satisfaction of this requirement, RCWD will implement plans for importing surface water from outside the District's boundaries, for use in mitigating groundwater overdraft within the District. This will be accomplished by a combination of direct recharge onto hydrogeologically-appropriate lands within or nearby the District, and by implementation of an in-lieu recharge program, where imported surface water will be supplied to irrigators within RCWD in exchange for their agreement to reduce reliance upon groundwater pumps, thereby reducing the quantity of groundwater pumped from the aquifer.

B. Direct Groundwater Recharge

The project will incorporate direct recharge of groundwater to the extent practicable given the soils profiles underlying project lands. Effective recharge programs depend upon soils profiles which are reasonably permeable from the ground surface to the groundwater table, thereby allowing water applied to the surface to make its way into the groundwater aquifer over time. If the soil profile is punctuated by one or more extensive impermeable clay layers, water infiltrating from the surface can become blocked or "perched" on that impermeable layer, and actual recharge of the aquifer will be reduced or even precluded completely.

In the project area, most of the surface soils are sand or sandy loams, to depths of 15 to 25 feet. At that depth, there is often a clay lens of five to 25 feet in thickness. The only significant exception to this profile is along the westerly reach of the Root Creek channel, where it appears that the soil profile is relatively permeable to a depth sufficient to facilitate long-term groundwater recharge.

Appendix C details the program of subsurface drilling that was undertaken as part of the preparation of this Infrastructure Master Plan. Complete results are presented in the Appendix. With only minor exceptions, the soil beneath Gateway Village is not conducive to direct recharge of water in the volumes needed to support the proposed project.

This plan proposes a limited scope of direct recharge along the Root Creek Channel and on a 80-acre parcel near the Root Creek Channel east of Road 35. Impoundments required to detain water in the Root Creek Channel just west of the Village Boundary will be constructed incrementally in Phases 1 through 3, as

actual water demand and storm drainage runoff increases. In addition, grade-control structures will be constructed in the reach of Root Creek within the Village. The primary purpose of the grade control structures will be to reduce stream velocity and inhibit erosion, but they could also be used to create aesthetic ponds, if desired. The reach of Root Creek within the Village would probably not be a productive recharge area, but, nevertheless, some incidental recharge will occur when water is temporarily impounded behind the grade-control structures.

The recharge area east of Road 35 will be acquired by RCWD prior to construction of Phase 1, and will be developed and placed into use with Phase 2.

The most readily available source of water for direct recharge is storm water runoff from the project area. This water will only be delivered to Root Creek after it has been treated in sedimentation basins located within the Village. In addition to stormwater, water procured through an agreement with MID (described below) may also be used for recharge. Groundwater recharge can then be performed behind impoundment structures west of the Village. The water supply obtained for in-lieu recharge, detailed below, could also be used for direct recharge if the need arises and facilities are available.

C. In-Lieu Groundwater Recharge

Because of the difficulty of recharging large quantities of water through the soil profiles found in the project area, an alternative method of recharging the groundwater basin has been developed.

While a limited portion of the agricultural land within RCWD is currently irrigated with surface water from San Joaquin River holding contracts, most growers either have no rights to surface water or have rights insufficient to fully meet crop demands. These growers pump groundwater to irrigate their lands. If there were a supply of surface water available at a competitive price, growers would have an incentive to use that water instead of pumped groundwater. The in-lieu irrigation program proposed by Gateway Village will provide just such a supply.

Since Gateway Village does not have the right to purchase many types of irrigation water nor to use existing canals as conveyance facilities, the developer has obtained agreements with RCWD to make the actual water purchases and convey water through its facilities, with the costs above and beyond the revenues received from grower water sales being borne by the developer.

With RCWD's provision of a supply of surface irrigation water to these growers, the quantity of pumped ground water for irrigation can be reduced on a one-to-one basis. This is a quicker and more efficient method of protecting and enhancing the groundwater basin than is direct recharge.

RCWD, in consultation with Provost & Pritchard Engineering Group, has prepared a plan for an in-lieu groundwater recharge system that would be capable of supplying up to 10,000 AF per year to lands within RCWD. That is approximately 57% more than the 6,374 AF expected total municipal use of the project. The full capability of this system will not be implemented for Gateway Village, but the program could be expanded by RCWD in the future.

Water for in-lieu recharge for Gateway Village will be acquired by RCWD through agreement with Madera Irrigation District, and will consist of Section 215 flood flows, MID Class 2 water, and other high-flow water supplies. Based upon historical trends and records, the proposed system at build-out will deliver approximately 2,304 acre-feet (AF) of irrigation water annually, on a rolling five-year basis, and offset an equivalent amount of agricultural groundwater pumping. The plan is presented in more detail in **Appendix D**, and the area outside of the project boundaries to receive these waters is shown on **Figure 2**. In addition, many areas within the project boundary will be included in the program until development proceeds to that point.

The in-lieu system's diversion structure and delivery system will be constructed along with the first phase of the Gateway Village project, to allow maximum utilization of available surface waters from the beginning of construction.

The commitment of the project through the combined groundwater overdraft reduction programs is to perform 3,400 AF/year of recharge as measured on a rolling five-year-average basis, an amount adequate to eliminate the current groundwater deficit within RCWD. The in-lieu facilities, with their large annual capacities, will be used to the fullest during above-normal water years to raise the five-year average, and may not be used during dry years when the identified water supplies are not available.

There is no intent to fully-utilize these in-lieu facilities every single year, and there is no commitment to increase the 3,400 AF/year contribution from the combined groundwater overdraft reduction programs toward district-wide overdraft even if subsequent study shows the estimated overdraft to have increased. A back-up supply to be provided by RCWD will provide a final safeguard against the possibility of multiple, successive dry years.

D. Back-Up Water Supply

RCWD's agreements with MID for Section 215 flood flows and Class 2 water supplies can be shown to be historically more than adequate to meet the demands and commitments of Gateway Village for water supply and recharge. However, in the interest of providing an added degree of reliability and assurance of adequacy, RCWD has contracted for an additional backup water supply from Westside Mutual Water Company, in an amount up to 7,000 acre-feet, in any year and in every year when required to maintain the recharge commitments

discussed above, and to supply water for direct treatment and delivery to area residents. This amount, by itself, is more than enough to meet the full consumptive demand of the project.

The Westside Mutual Water Company water supply is sourced outside of Madera County, and will be delivered by exchange of water supplies through the Friant system, using the San Joaquin River and the Madera 6.2 lateral in addition to the project's in-lieu irrigation system and potentially a future surface water treatment plant. As such, this supply represents "new" water to Madera County, and would be applicable directly toward the project's consumptive demand in any water balance calculation.

Complete details of this back-up water supply, including term of agreement, price, delivery conditions and so forth, are contained in the actual supply agreement, submitted under separate cover.

It is again noted that the back-up water supply is intended as a fail-safe, and under ideal or average conditions will not have to be used to maintain the required rolling-average water balance. It has been put in place only to assure stakeholders that the project's water supply is not at risk in even a series of dry and very-dry years.

VII. WASTEWATER COLLECTION, TREATMENT, AND DISPOSAL

A. General

Project wastewater will be collected and treated within the project boundaries. In the initial phase, effluent will be reclaimed for agricultural use on lands outside of the project area. As the project proceeds toward build-out, some wastewater effluent may be reused for open-space irrigation within the project area. See **Figure 2**.

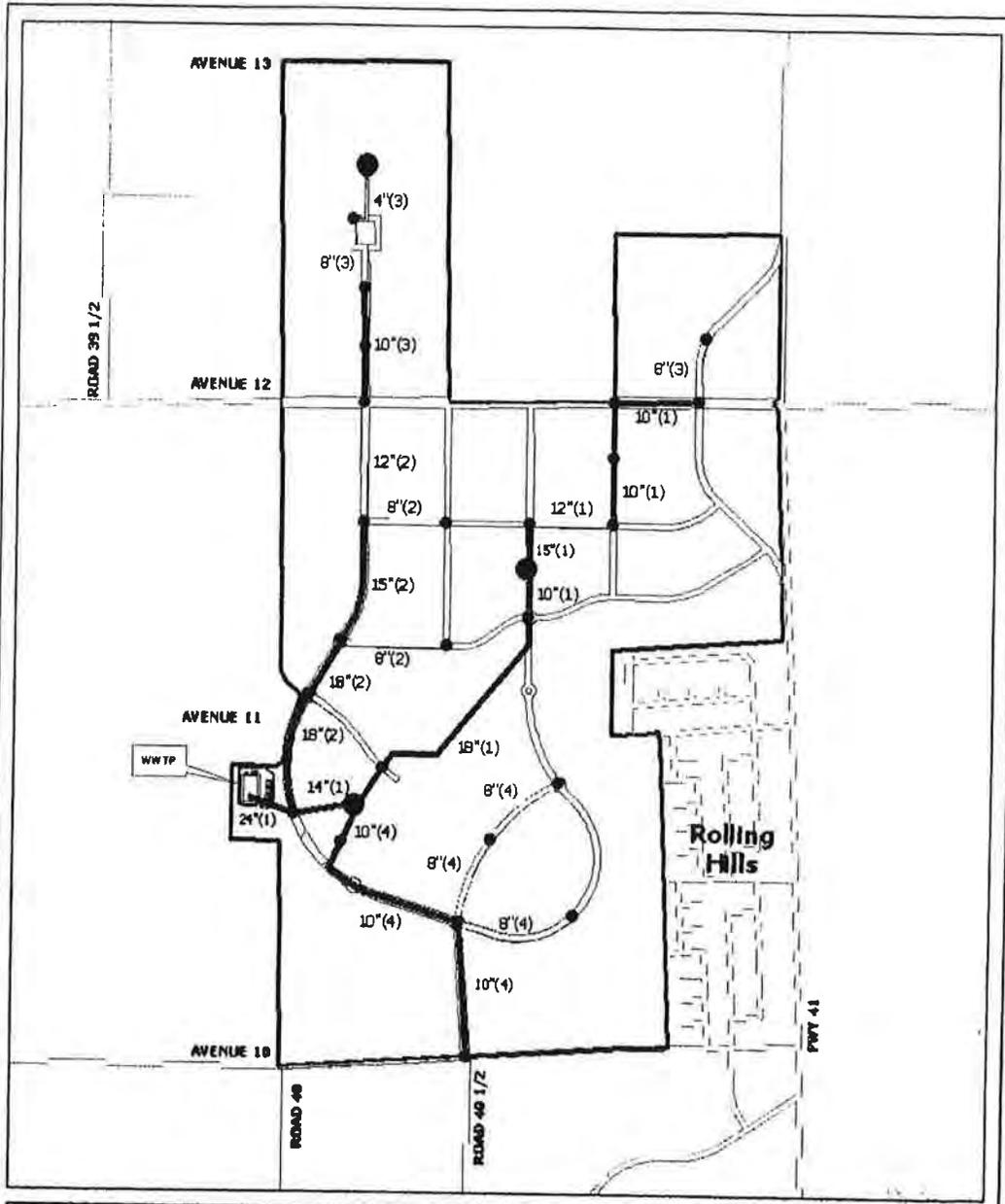
The Gateway Village Area Plan contemplates a population of 21,313 at project build-out. Using industry-accepted wastewater generation factors, this equates to a total estimated flow of approximately 1.67 million gallons per day. Including high-end estimates for commercial and industrial flows; total wastewater production could be as much as 2.0 million gallons per day (2,240 AF per year).

Detailed wastewater generation calculations are presented in **Appendix G**.

B. Collection Facilities

Collection facilities include gravity sewer mains of 8- to 18-inches in diameter, force mains, and three lift stations in areas where gravity conveyance is not feasible. The collection system will be constructed in phases, designed to

correspond with the service needs of the development phases. See **Figure 6**. Phasing for each pipeline segment and lift station is shown on the figure.



0 1,000 2,000
Feet

Proposed Sewer Lines - Size (Phase)

● Catchment Area

▭ Project Area

○ Manhole

— Wastewater Treatment Plant

4" 8" 10" 12" 14" 15" 18" 24"

Figure 6
Gateway Village
Proposed Backbone
Wastewater Facilities

The project lands generally slope from northeast to southwest north of Root Creek, and from southeast to northwest south of Root Creek, allowing construction of a gravity sewer system serving a majority of the project. Phases 1, 2, 4 and 5 will flow by gravity to the main lift station located near the WWTP, planned for a site near the southwest extension of Root Creek. Portions of Phase 3 will make use of pump stations and force mains to reach the main gravity collection system. The sewer collection system is shown schematically on the IMP Drawings.

Gravity sewer mains will typically be of PVC (SDR 35) construction with rubber-gasketed joints. Forced sewer mains will typically be of PVC pressure pipe, C-900, Class 150. Exceptions may be made in cases of water/sewer crossings where Health Department regulations require other materials.

Standard manholes shall be installed at intervals averaging 400 feet, and not exceeding 450 feet. Detailed specifications shall follow the practices typical of other urban areas in the Central Valley.

Lift stations shall be wet-well designs employing submersible non-clog pumps. Each lift station shall have a minimum of two pumps. The station shall be capable of meeting the peak design flow with one pump out of service. Pumps shall be specifically designed for operation in a raw municipal wastewater environment. All miscellaneous metals inside the wet well, including steps and pump rails, shall be of stainless steel to resist corrosion. Pump electrical services shall generally be 480V, 3-phase for economical operation. Lift stations with individual pumps rated at 2 horsepower or less may be 240V, 1-phase. Detailed specifications for lift stations and equipment shall be subject to approval by District officials at the time of project approval.

C. Treatment Plant Phasing

Wastewater treatment facilities will be constructed in multiple phases, as the development is built out. These construction phases are distinct from the neighborhood phasing mentioned throughout this IMP, and are lettered rather than numbered to help reduce confusion. While the final decision on the capacity of each phase will be made as development proceeds and absorption rates are better known, the Phase A facilities will be designed to handle 0.55 MGD. At the design rate of 75 gpcd and assuming 3.24 persons per household, 0.55 MGD will support 2,263 EDUs, which are approximately 20 percent more units than are planned for Phase 1 and the Mixed Use Core – Village Core zone district.

Two more phases of approximately 0.55 MGD capacity each will be constructed as demand warrants. The WWTP site shown on the exhibits is large enough to accommodate facilities to treat approximately 2.0 MGD, should the need ever arise. The treatment plant phases, capacities and anticipated timing are shown in the following Table 5:

Table 5
Wastewater Treatment Plant Phasing

Plant Description	Capacity	Development Phase
Phase A (Disinfected Secondary design, supporting 2,263 EDU)	0.55 MGD	1
Phase B (Upgrade to Tertiary treatment level, approximately 4,525 EDU capacity)	1.1 MGD	3
Phase C (expand tertiary capacity to approximately 6,790 EDU)	1.65 MGD	4
Phase D (expansion if necessary)	Up to 2.0 MGD	5

Appropriate conditions of approval requiring expansion of the treatment facilities to accommodate new construction in a logical and modular fashion should be included in the phased subdivision maps as they are processed.

D. Treatment Processes

Wastewater in Phase 1 shall be treated to by biological and chemical processes to disinfected secondary standards, suitable for land application to a variety of edible and non-edible crops, including the orange trees grown on the land proposed for effluent reclamation in **Figure 2**.

In later phases, wastewater treatment will be upgraded by filtration to achieve tertiary-quality effluent, meeting State Water Quality Standards (Title 22) for unrestricted use. A Report of Waste Discharge shall be filed with the Regional Water Quality Control Board for each project phase. The WWTP will be subject to the Waste Discharge Requirements promulgated by the Board subsequent to those applications.

Choice of the specific treatment plant design has been deferred to the time of final project design. The plant shall incorporate an aerated biological process together with chemical disinfection. That process may be one of several general types. Alternatives include activated sludge, aerated lagoon, Sequencing Batch Reactor, and Membrane Bioreactor. Disinfection may be by chlorination or ultra-violet light. Schematic diagrams and detailed discussion of proposed treatment processes are included in **Appendix G**.

E. Effluent Disposal and Reclamation

The goal for effluent disposal within the Gateway Village project is to maximize the conjunctive use of reclaimed water to reduce use of fresh water wherever technically and economically practical. This approach will have the multi-pronged benefit of conserving groundwater, reducing irrigation costs for open

spaces and parks, and providing neighboring landowners with an additional source of agricultural irrigation water. Potential locations for effluent reclamation are shown on **Figure 2**. Not all potential locations may ultimately be required.

While effluent is generated year-round, it cannot be applied beneficially to land on that same basis. Instead, it must be stored through the winter months and then applied at agronomic use rates during the warmer months. Water balance calculations have been prepared, demonstrating a balance between effluent storage and available reclamation areas, allowing application of all effluent in a manner that does not exceed the agronomic demand of the receiving lands. The calculations take into account the effects of a wet (100-year recurrence interval) rainfall year. See **Appendix H**.

All lands used for effluent reclamation must be permitted by the Regional Water Quality Control Board and the Department of Health Services prior to commencement of reclamation activities. These permits shall be applied for concurrently with the filing of the Report of Waste Discharge.

If it were proposed that effluent be allowed to enter a Water of the United States, an NPDES permit would be required for wastewater reclamation. Since that is not the case with this project, and all effluent will be applied to lands within agronomic demands, no NPDES permit is anticipated.

F. Biosolids Disposal

Disposal of biosolids generated by the WWTP in Gateway Village will be in accordance with regulations contained in EPA 40 CFR 503, and State Water Resources Control Board Water Quality Order 2000-01-DWQ, "*General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use as a Soil Amendment in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities (General Order)*."

All disposal operations will operate under the permitting authority of the Regional Water Quality Control Board (RWQCB) and the Department of Health Services (DHS), and shall comply with any future Madera County ordinance which regulates land application of treated municipal sludge. (No ordinance is currently in place, though such legislation has been considered.)

Prior to commencement of wastewater treatment operations, the District shall prepare, for approval by RWQCB and DHS, a Biosolids Disposal Plan. Such plan shall address expected chemical composition, monitoring, and testing of biosolids, in addition to long-term impacts upon the disposal site, underlying groundwater and current cropping patterns.

All sludge will be processed and treated so that it may be classified as Class A, suitable for disposal with minimum restriction on use. Treatment processes may

include stabilization by digestion or composting to reduce potential pathogens to permissible levels.

To help assure Class A sludge quality can be produced, RCWD will institute industrial wastewater pretreatment, monitoring, permitting and control programs when they become appropriate, in accordance with USEPA 40 CFR 403 regulations.

G. Environmentally-Beneficial Project Features

The design plans for the WWTP will incorporate appropriate and cost-effective odor and noise reduction measures, to the satisfaction of the Madera County Planning and Engineering Departments.

The IMP Drawings show the WWTP located at the westerly-most edge of the plan area, separated from residential development by both roads and open spaces, and surrounded by agricultural lands, to minimize both the aesthetic impacts of the treatment facility and the potential for odor impacts within the project. Additionally, the design of the WWTF will minimize production and propagation of odor by enclosing most odor sources and providing careful control of the process to maximize treatment efficiencies and minimize the chances of odor or process upset. Detailed designs will be brought forward for review by County and RWQCB staff subsequent to project entitlement.

VIII. GRADING, DRAINAGE, STORM WATER DETENTION AND DISPOSAL

A. Introduction

The purpose of this section is to provide design guidelines for storm drainage improvements, identify permit requirements regarding storm water facilities, and to identify additional hydraulic studies required during the design phase for the Gateway Village project.

B. Grading Design

Grading for the project shall be in accordance with the Madera County Grading Ordinance, the 2002 or current UBC Appendix Chapter 33, and the recommendations provided in this IMP and its appendices. The IMP Drawings include a Storm Drainage Master Plan (SDMP) showing, among other items, the approximate inlet drainage area boundaries and the top of curb elevations defining the inlet boundaries. The top-of-curb elevations and inlet boundaries have been developed to control overland routing of flood storm waters in the event of inlet or pipeline failure.

Drainage area boundaries and interior tract elevations shown on the SDMP support the hydrologic and hydraulic calculations for pipeline design. Interior tract elevations are for design reference and locate low spots for master planned

inlets and are not meant to be relied upon as design grades at any interior tract point of the project.

Building pad elevations for the individual subdivisions shall be designed to a minimum of one (1) foot above the master-planned top of curb inlet elevation in the corresponding inlet tributary area. This criteria will reduce flood risks to the building structures during an extreme storm event over and above the storm drain pipeline and inlet design criteria.

During project design, detailed grading plans shall be prepared, in conformance with the overall drainage concept and the defined drainage area boundaries. Drainage areas, curb and inlet elevations will be refined and coordinated throughout the project. Grading plans must be prepared for and reviewed by the Madera County Engineering Department.

C. Existing Drainages

Three ephemeral streams are located within the Gateway Village project site. The Madera Ranchos South drainage is north of the Avenue 12 alignment. Root Creek and a tributary north of Root Creek come together just northeast of the intersection of the Avenue 11 and Road 40 ½ alignments.

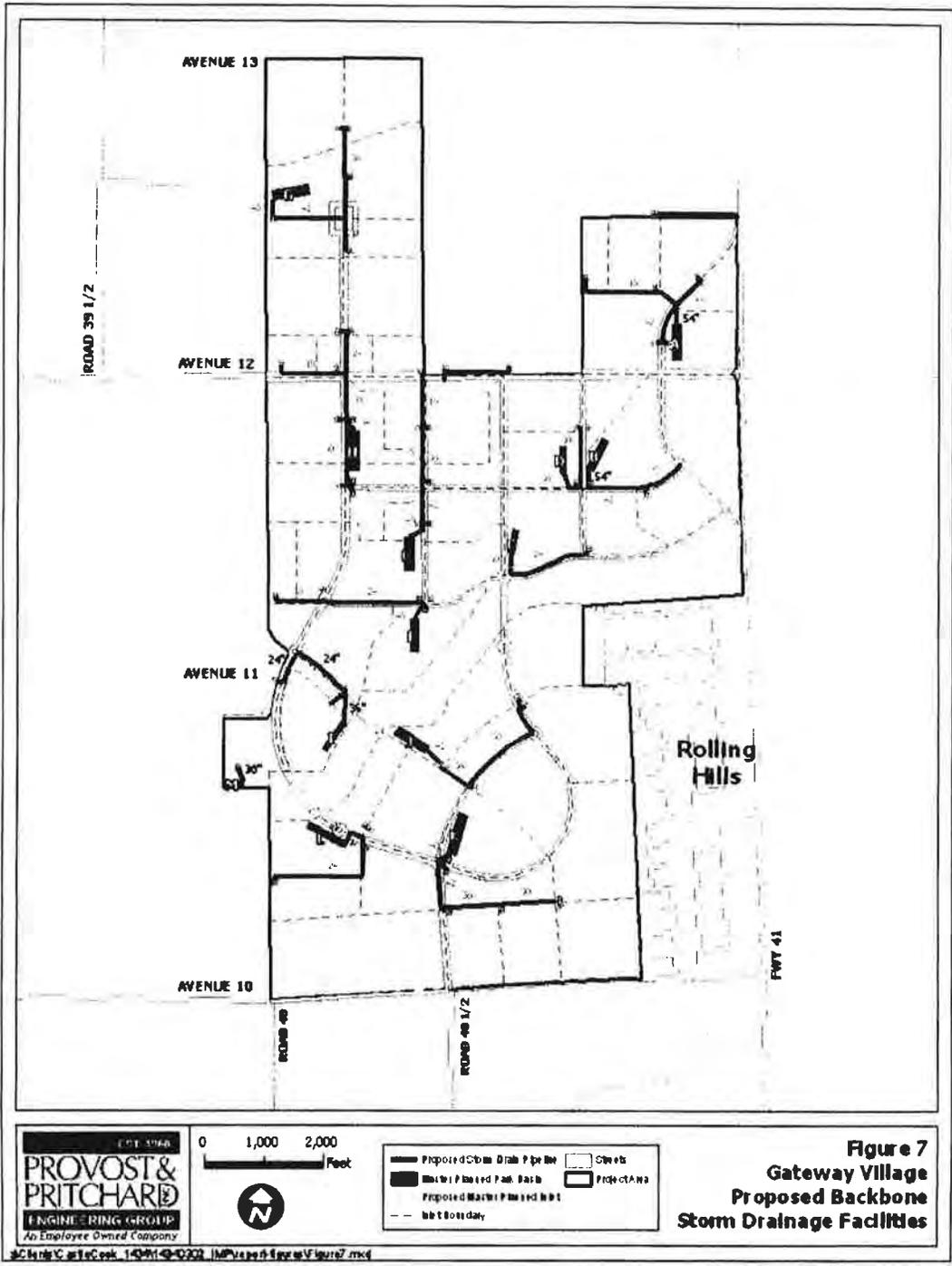
It is anticipated that the Madera Ranchos South and Root Creek drainages will require permits under Section 404 of the Clean Water Act prior to grading of the project site. The developer shall meet with the Regional Water Quality Control Board (RWQCB) and other jurisdictional agencies to discuss the phased project grading limits that contribute flows to the corresponding stream and obtain the necessary permits as part of the design development phase of the project.

Depending on the specific aspects of the project design, the developer may also be required to meet with other agencies that have a vested interest in the 404 permitting process. Agencies with interest might also include the California Department of Fish and Game, the Army Corps of Engineers (ACOE) and the California Regional Water Quality Control Board.

It is anticipated that a letter of map revision (LOMR) from the Federal Emergency Management Agency (FEMA) will be necessary for both Root Creek and the Madera Ranchos South drainage, prior to commencement of grading operations. The LOMR should be filed with FEMA during the design phase of the project improvements, to incorporate the applicable RWQCB storm water Best Management Practices that may impact the flood limits within the project. Requests to deviate from the provisions of this IMP must be reviewed on a tract-by-tract basis with the Madera County Engineering Department.

If during the process of the project grading design, it becomes apparent that drainage patterns and inlet drainage boundaries should be adjusted, the

developer will be responsible to provide calculations supporting the proposed modifications. In addition to providing an agreeable solution to flood routing, the calculations shall demonstrate that the overland hydrology and pipeline hydraulics will work with the upstream and downstream master-planned facilities.



The developer shall also detail the proposed changes to be made to the IMP storm drain backbone facilities as a consequence of the project grading design. Such changes are subject to approval by the Madera County Engineering Department.

See **Appendix I** for information regarding sedimentation basin grading and location of the overall SDMP drainage concept.

D. Storm Drainage Design

Storm drainage runoff within the Gateway Village project area shall be collected and conveyed in public facilities consisting of inlets, pipes, open channels, culverts, outlet structures, sedimentation basins and appurtenances. See **Figure 7**. The storm drain design for the project shall be in accordance with the Madera County Design Standards and Specifications, along with the following recommendations provided in this IMP and appendices:

1. Inlet and Outlet Structures:

Inlet and Outlet Structures shall be a type and configuration rated to accept the SDMP design flow at the inlet and outlet locations shown on the SDMP.

2. Pipelines:

Storm drain pipeline design shall conform to the SDMP. Pipeline soffits shall be designed a minimum of one (1) foot below the hydraulic grade line (HGL) or to the soffit control elevation shown in the hydraulic calculations in **Appendix I**. The design of the storm drain pipeline below the HGL ensures full pipe flow and reduces the chance of water seal breaks in the pipe and other hydraulic inefficiencies during pipeline use. Design of pipeline below the soffit control elevation ensures proper pipeline performance in sections of the pipe where flow is in the open channel condition due to steep grade construction.

3. Culverts and Open Channels:

Culverts and open channels shall be designed to the standards of the Federal Highway Administration Hydraulic Design of Highway Culverts (HDS-5, September 2001 or current) and the Madera County Design Standards. The culverts and channels shall be designed to convey the critical storm event for the Gateway Village project, which was determined to be the 100-year, 6-hour storm event. The hydrologic data for each open channel segment is provided in **Appendix I**.

4. Sedimentation Basins:

Sedimentation basin design calculations and minimum basin geometries are provided in **Appendix I**. The basin geometry for each watershed is different depending on many factors, including the contributing drainage area and the design flow volume.

Conceptual basin locations are shown in the SDMP. These locations have been selected to work with the existing ground topography and the overall master-planned drainage concept. Exact sedimentation basin locations shall be determined by the developer, after precise site layouts are determined.

The Madera County Engineering Department will review the project sedimentation basin design for conformance with the sediment basin calculations and conformance with the sediment basin design guidelines provided in **Appendix I**.

E. National Pollution Discharge Elimination System (NPDES)

Storm water originating from the development of the project site shall be treated utilizing Best Management Practices (BMPs) as permitted by the National Pollution Discharge Elimination System (NPDES) general permitting process of the Clean Water Act. BMPs for the Village will be developed during the design phase, and may be drawn from local area authorities including the Fresno Metropolitan Flood Control District (FMFCD), and Caltrans as appropriate.

BMPs may also be drawn from the California Stormwater Quality Association (CASQA) Storm Water Best Management Practice Handbook. The CASQA handbook series contains recommendations for New Development Planning, Construction, Municipal, Industrial and Commercial BMP applications. All BMPs used shall be selected for their suitability to project requirements and shall be adapted to local conditions as necessary. BMPs shall be employed prior to the start of grading construction for the site and shall be adapted as necessary as the project construction progresses. Permanent BMPs shall be maintained during the entire project lifecycle.

Pretreated storm water will be disposed of through sedimentation basins prior to its release into open channel facilities that flow into Root Creek. Treated storm water will then be released through weirs or other applicable outlet facilities that work with the sedimentation basin design. The outlet feature of each sedimentation basin shall be designed so that water released to Root Creek will be at a maximum of pre-development peak runoff rates. Overall volume of water flowing into Root Creek will be increased (by approximately 45%) due to an overall increase in land use intensities versus existing uses, but that increase will be slightly mitigated by a combination of incidental percolation and evaporation in the sedimentation basins.

Storm drainage facilities are shown schematically on the IMP drawings. Hydrologic, hydraulic and facility size calculations are included in **Appendix I**.

Prior to the start of grading activities for site improvements, the developer shall file a Notice of Intent (NOI), which is a General Permit for Storm Water Discharges Associated with Construction Activity, with the California State Water

Resources Control Board (SWRCB). The developer shall also prepare a Storm Water Pollution Prevention Plan (SWPPP) and provide a current copy of the SWPPP to remain on the construction site at all times. The SWPPP shall include construction and post-construction BMPs. The developer shall pay an NOI fee to the SWRCB. At the end of the construction project, the owner shall file a Notice of Termination (NOT) with the Regional Water Quality Control Board (RWQCB) and provide documentation of substantial project completion, to terminate the NPDES permit coverage.

As the Village develops and the area becomes more urbanized, Root Creek Water District may be identified by the SWRCB or the RWQCB as a small MS4 (Municipal Separate Storm Sewer System) operator under the Phase II guidelines of the NPDES general permit. Among other factors, the SWRCB or the RWQCB will evaluate the population growth and population densities of Gateway Village to determine when permit coverage will be necessary.

When the SWRCB or the RWQCB determine that permit coverage is necessary for RCWD and notification is received, the County or the District will have 180 days to file a separate Notice of Intent (NOI) with the SWRCB together with a Storm Water Management Plan (SWMP) and the appropriate fee. This NOI and the SWMP will be the responsibility of the District as the owner and operator of the storm drainage facilities.

The SWMP preparation process includes development of locally-adapted storm water Best Management Practices that reduce pollutants in storm water runoff to the technology-based standard of Maximum Extent Practicable (MEP) to protect water quality. Once the SWMP is accepted by the RWQCB, the District will be responsible for enforcement of the BMPs and compliance with water pollution related policies and procedures as defined in the SWMP.

F. Madera Ranchos South and Root Creek Permit Requirements

1. Madera Ranchos South Drainage:

The FEMA Flood Insurance Study has detailed a flood study of the lower reach of the Madera Ranchos South drainage, its easterly end being approximately at the Road 38 alignment, approximately two miles west of the Gateway project boundary.

The storm drain master plan anticipates that approximately 200 acres of the project will ultimately drain to and enter the Madera Ranchos South watercourse. The IMP anticipates that the post-development runoff from this area may require the developer to file a Letter of (Flood Insurance Rate) Map Revision (LOMR) and an updated flood map with FEMA. As part of the submittal, the developer's engineer will be required to prepare a flood study of the drainage in accordance with FEMA requirements and standard procedures, showing the impact of post-

development flows and demonstrating that there is no impact upon neighboring, upstream or downstream property owners.

The project will be obliged to construct any capital improvements necessary to assure that drainage to Madera Ranchos South will have no such impact. Details of those improvements, if any are to be required, are deferred to the design phase, when the layout of the project is known and the total impacts can be accurately assessed.

2. Root Creek and Tributaries:

The current FEMA Flood Insurance Study details a 100-year flood plain along the lower reach of Root Creek, as far east as the Road 36 alignment some four miles west of the Gateway Village project boundary. Design of the Village will require extending the flood study east through the project to Highway 41.

As part of the work on this IMP, a preliminary hydraulic analysis of Root Creek was prepared through the Gateway Village project area from Highway 41 to Road 36, using HEC-RAS stream routing software. The existing channel conditions were modeled for the 100-year critical storm event, which was determined to be the 6-hour storm. The critical storm is defined as the event producing the greatest difference in pre-development versus post-development peak flow rates for the project.

During the design phase, a complete hydraulic study of the project area must be prepared, pursuant to FEMA guidelines. Two objectives of the study will be establishment of the 100-year flood plain through the project area, and support for any potential Letter of Map Revision (LOMR) application which the developer may seek in order to modify the structure of Root Creek through the Root Creek channel corridor. Among other design details, the Root Creek hydraulic design report should include the proposed culvert types, size and channel design recommendations.

Standards for flood protection within the project area, including those relating to rural and urban design hydrology, flood routing, open channel design and storm drain pipeline hydraulics, will generally follow those currently adopted for the Fresno-Clovis area by FMFCD. Possible future changes in those requirements by FMFCD will not affect the requirements set forth in this IMP.

G. Flood Routing Drainage Concept

The project will grade toward collection facilities which will drain directly toward Root Creek. This will be accomplished by overland surface flow into inlets, then collection pipes, and into sedimentation basins prior to release into Root Creek. The drainage areas are defined in **Appendix I**.

H. Additional Root Creek Detention Facilities

Treated storm water will be further detained in Root Creek throughout the Gateway Village project by a series of small weir structures located within the Root Creek channel. These detention facilities will enhance the Gateway Village project by providing more aquatic features adjacent to the development, and will contribute incrementally to direct groundwater recharge.

The preliminary soils investigations and grading studies indicate that construction of detention facilities in the Root Creek channel would be an effective method of storm water detention. Existing topography suggests that as many as five or six detention structures may be appropriate. Structures would be located along Root Creek throughout the project and as far west as Avenue 38. A separate hydraulic model and submission of a LOMR to FEMA may be required to model the flood map changes of Root Creek as a result of the small weir structures.

I. Interim Facilities

As phases of the project are developed, the storm drain collection system within the phase boundaries shall be constructed to its planned configuration, with all required inlets and master plan pipe sizes, except as drainage areas are modified and approved by the Madera County Engineering Department as discussed above. Except for the construction of temporary storm water detention facilities, no other interim collection facilities are anticipated for this project.

Construction of temporary storm water detention facilities will be allowed when the collection system required to reach the master planned sediment basin has not been constructed and is outside of proposed phase boundaries. These basins or other storage facilities shall be designed to provide storage for a 100-year, 10-day storm event (6 inches of precipitation) with enough capacity to serve the phased developed areas.

Allowance shall be made in locating and design of such temporary facilities to allow integration with permanent facilities to the greatest extent practical, and for elimination of the temporary facilities in a timely manner as the ultimate collection system is completed.

J. Facility Design Criteria

Master-planned collection facilities in the residential areas shall be designed to convey a design storm with a fifty (50) percent probability of occurrence, which is also known as a two (2) year return interval. Collection facilities in commercial areas shall be designed to handle a design storm with a five (5) year return interval.

The existing Madera Ranchos South drainage, Root Creek, and the tributary north of Root Creek will continue to traverse through the Gateway Village Project

site. These ephemeral streams are drainage watercourses that originate in rural watersheds upland from the Gateway Village project. Any modification of these three drainage watercourses will require the developer to design facilities that convey the critical design storm for the 100-year return interval (a one-percent probability of occurrence), plus the pre-development runoff contribution from the project area, while providing detention storage for the post-development runoff increment so that the increment can be released after the peak of the storm has passed.

Modification of these watercourses may include a combination of open channels, culverts, inlets/outlets, underground pipelines, impoundments and other detention facilities. During the design phase, a final flood study will be necessary for Root Creek and its tributaries. This study will need to incorporate the effects for the proposed development and all proposed facility modifications. The flood study shall be used to prepare a LOMR application for consideration by FEMA. Once approved by the County Flood Plain Administrator (in the County Engineer's office) and by FEMA, this application will result in establishment of a revised 100-year flood plain within the project area.

K. Storm Drainage Best Management Practices

Development of a full set of storm drainage Best Management Practices (BMPs) is deferred to the District at the time it becomes a small MS4 and must prepare its own Storm Drainage Management Plan. In the mean time, BMPs adapted from nearby agencies will be employed. At minimum, sedimentation controls must be applied prior to discharge of storm water into Waters of the United States such as Root Creek and its tributaries.

Sedimentation basins will be distributed throughout the project site, and will discharge into facilities that will convey the desedimented storm water into Root Creek or Madera Ranchos South. Criteria for settling basin designs are provided in **Appendix I**. In addition to sediment removal, the basins will also serve as detention basins, being sized to reduce post-development peak flows to the pre-development runoff rates resulting from the critical design storm.

L. Streambed Restoration

Although Root Creek and its tributaries are heavily developed as operating tree orchards throughout the project area, care must still be given to design of the streams and to the extent practical, restoration of riparian habitat along Root Creek. To that end, a defined channel will be created for Root Creek throughout the project, and it will be developed with native plant, grass and tree species typical of Madera County riparian corridors. Plans for such restoration will be subject to review and approval by the ACOE, and all applicable permits shall be secured by the developer.

M. Environmentally Beneficial Project Features

- The developer will retain a paleontological resource management consultant to perform a broad scope of work during construction. Tasks will include:
 - ◆ Development of a formal agreement with a recognized museum repository.
 - ◆ Develop a discovery clause and treatment plan
 - ◆ Conduct a pre-grading field survey
 - ◆ Facilitate a pre-grading meeting with the field supervisors and construction monitors
 - ◆ Conduct construction monitoring of earthmoving activities
 - ◆ Develop a small-specimen evaluation and recovery program
 - ◆ Prepare geologic maps of areas not already mapped
 - ◆ Conduct field testing and reporting
- The paleontologist will develop a specific procedure to be followed in the event that the contractor discovers prehistoric or historic subsurface resources during construction.
- Dust abatement measures will be included in every road construction and grading contract, ordering compliance with San Joaquin Valley Unified Air Pollution Control District (SJVUAPCD) Regulation VIII, and reducing construction-related PM₁₀ to a less-than-significant level.
- The following specifications will be included in all appropriate construction contracts:
 - ◆ Asphalt paving within the Plan area shall comply with the specification in SJVUAPCD Rule 4641, which restricts the use of cutback, slow-cure and emulsified asphalt paving materials.
 - ◆ Work crews must shut off equipment when not in use.
 - ◆ Heavy construction equipment shall be diesel-powered, certified to meet the NO_x standards established for new heavy duty diesel equipment by the CARB, gasoline-powered equipment fitted with catalytic converters, or alternative-fueled equipment (e.g., compressed natural gas).
- A qualified biologist or equivalent professional will be retained to oversee all aspects of construction monitoring that pertain to biological resource protection, including a pre-construction survey (within 30 days prior to grading operations) for burrowing owls.

- The developer will implement soil sampling to screen for exposure to pesticide applications in areas proposed for "sensitive" land uses including residences and schools. This measure will be implemented at the time of construction activities.
- All construction documents prepared for the various phases of construction shall incorporate these requirements to the satisfaction of the County of Madera and the various regulatory agencies.

IX. PROJECT WATER BALANCE

A. General

As mentioned above, a 2001 estimate showed the Root Creek Water District to be overdrafting approximately 3,400 AF of groundwater per year, based upon then current land use, cropping and irrigation patterns and the historical inflow of groundwater to the District. The goal of the project is not to replace all groundwater used consumptively within the project, but to take steps to mitigate the existing District-wide groundwater deficit. Those steps have been presented above and are summarized in this section.

B. Consumptive Water Use

From **Appendix A**, total consumptive water use within the project at build-out will be approximately 6,374 acre-feet per year. This is marginally less than the 6,450 acre-feet estimated use by the current agricultural enterprises with the project area.

C. Groundwater Recharge

Between direct recharge efforts and the in-lieu recharge program, a minimum of 3,400 acre-feet of water will be imported into Root Creek Water District boundaries each year on a 5-year rolling average basis, and recharged into the groundwater aquifer. These figures are detailed in **Appendix C** and **Appendix D**.

D. Effluent Reclamation

In addition to the acreage irrigated by imported surface water, there will be crop acreage irrigated by reclaimed treated wastewater. A total of 1,767 acre-feet per year will be available at build-out, which is sufficient to irrigate approximately 498 acres of citrus, and more acres of grass or other crops, depending upon the crop grown. See Section VI above.

E. Summary

A calculation of groundwater balance, accounting for each of the water types mentioned above, is included as **Appendix K**. By implementing the water

recharge and reclamation programs detailed in this IMP, the project will have the capacity to make up for the Root Creek Water District's current 3,400 acre-foot/year deficit, with a net water surplus of 2,735 acre-feet per year at build-out, if all available recharge facilities were to be maximized. While there is not commitment to operate the recharge facilities at that level, that high capacity provides assurance that the rolling average of 3,400 acre-feet/year can be met reliably.

X. STREET AND CIRCULATION SYSTEM

A. General

The purpose of this section is to identify the backbone street and circulation system within the project and outline policies that will be implemented to ensure adequate traffic capacity for movement of people, goods and services around and through Gateway Village.

The objective of the information provided in this section is to facilitate the planning process for sub-regional transportation facilities and individual developments by setting standards that will apply throughout the Village area. Locations of the Parkway (Type 3 and 3-Alt) and Secondary (Type 2 and 2-Alt) streets, together with the Gateway Village design standards, will provide a framework for design of individual project phases as they are brought forward.

Schematic alignments for the project's Parkway and Secondary streets are shown on **Figure 8** and in the IMP drawings. The alignments are not intended to be precise plan lines; they may be modified as additional neighborhood-level planning is completed over time. However, the areas served by each road will remain substantially similar and it is not anticipated that the traffic analysis presented under separate cover will be affected.

Neighborhood-level planning may introduce additional Secondary streets as neighborhoods are defined. Other changes and modifications could include changing particular secondary streets from single-loaded to double-loaded or vice-versa, adjusting intersection or roundabout locations to better-suit existing topography or facilitate final neighborhood layout, and final selection of street cross-section.

Street types indicated on **Figure 8** and in the IMP Drawings are intended to provide detail adequate for traffic capacity analysis and to allow decision-makers to assess the proposed overall design of the Village. Where a road of a particular Type is indicated (for example, a Type 2 Secondary street), detailed neighborhood design may result in any of the proposed sections of that type being constructed. That level of design detail is beyond the scope of this IMP.

Similarly, decisions regarding street loading and precise alignments are deferred to final design, to allow flexibility in programming the product mix of each neighborhood as the real estate market develops over the life of the project.

Should project design lead to a street layout which affects the traffic analysis conclusions and proposed mitigations, the developer shall submit a revised traffic analysis for review by the County, and shall make appropriate changes to the backbone road system to accommodate the actual traffic demands imposed by the proposed project.

Phasing of street improvement construction will be driven by the goal of maintaining Level of Service (LOS) D or better for all road segments and intersections affected by trips generated within Gateway Village. This IMP proposes an implementation schedule tied to specific development areas and phases.

Two points of connection to the County road system will be provided for all developments. Interior Parkway streets and certain Type 2 Secondary streets will be counted as part of the County road system for the purpose of determining points of connection. Primary access shall be provided by existing or master-planned roadways, improved in accordance with this IMP. Secondary access for emergency vehicles may be provided through all-weather access roads constructed in accordance with the Uniform Fire Code, Section 902 – Fire Department Access.

B. Existing Road System

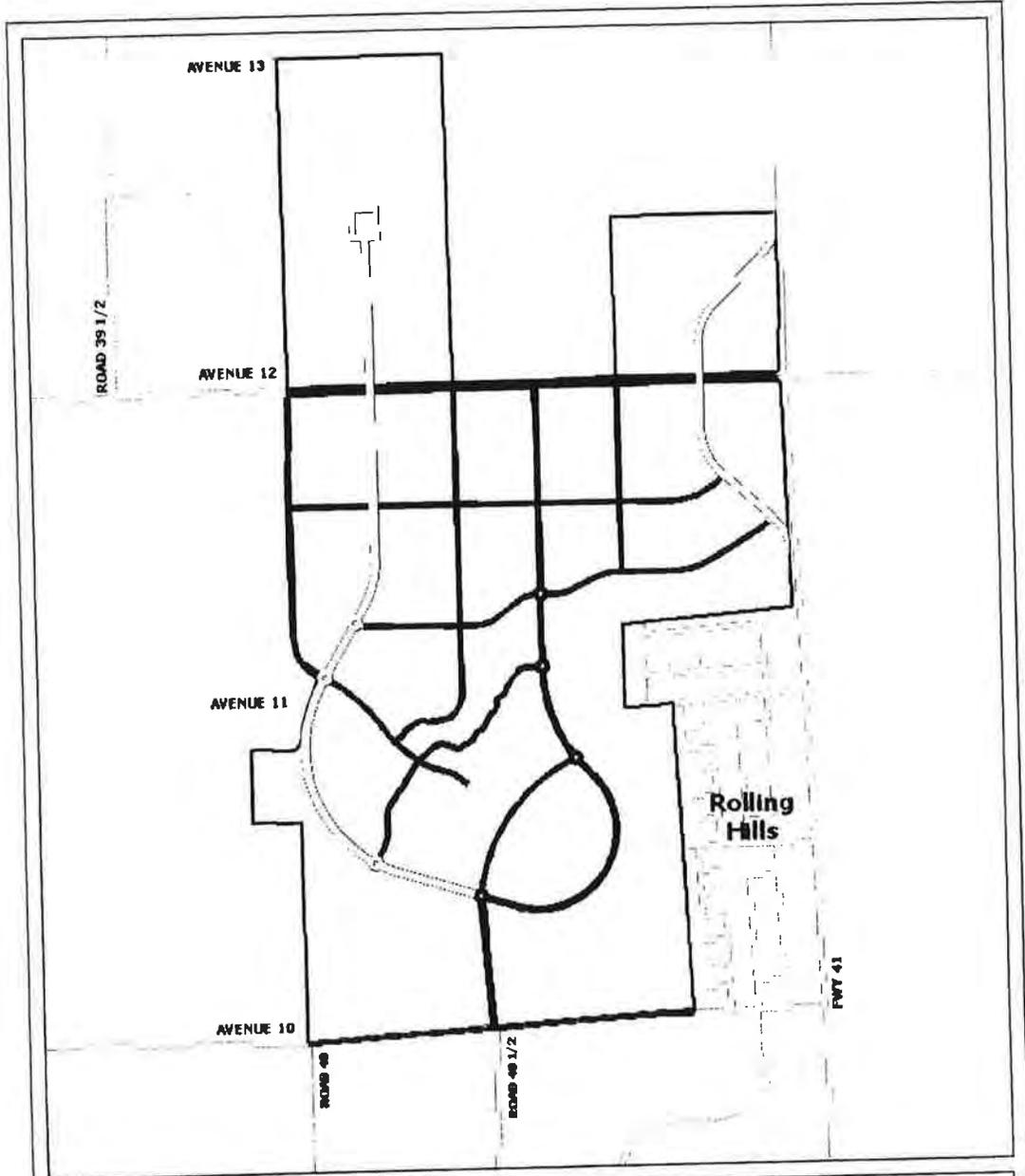
Several existing County roads cross through, border, or terminate at a boundary of the project area. Avenue 12, which crosses the northerly part of Gateway Village, is the major east-west thoroughfare and truck route in the southerly part of the County, connecting Highways 99 and 41. Avenue 12 is also the main street through the Madera Ranchos. It is fronted by a variety of land uses along its corridor, including agricultural, residential, commercial, and industrial.

Avenue 10, which forms the southerly border of Gateway Village, is served by an exit from Highway 41 but does not continue west to Highway 99. The Brickyard Industrial Park is on the north side of Avenue 10 between Roads 40 and 40-1/2, within the Gateway Village Area Plan and surrounded by Gateway Village on the north and east.

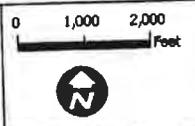
Avenues 10-1/2 and 11 each terminate at the easterly boundary of Gateway Village. Neither will not be directly connected to the Gateway Village street system. Neither connects to Highway 41, but both extend through the Rolling Hills subdivision to the West Frontage Road.

C. Layout and Designation of Proposed Streets

Gateway Village has been planned to follow Neo-Traditional concepts for residential and community development. The *Gateway Village Circulation Element* (prepared by TPG Consultants, **Appendix L**) provides an integrated transportation system designed to serve the needs of all residents through the use of functional streets, pedestrian and bicycle facilities and right-of-ways for public transit.




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	Project Area		3 ALT
	2		4
	3		5

Figure 8
Gateway Village
Backbone
Circulation Plan

The Circulation Element incorporates a hierarchy of streets which provide for local, primary, and secondary functions. Main access to and from the MUC – Village Core land use district is from Avenue 12. Secondary access is provided via Valley Children’s Boulevard and Avenue 10. The backbone of the system is Root Creek Parkway, which connects all the neighborhoods of Gateway Village, and serves as the major link between Avenues 10 and 12. Root Creek Parkway has been designed with integrated pedestrian and bike trails along its heavily landscaped corridor.

Root Creek Parkway East has a transit component, in the form of a preserved right-of-way. The transit right-of-way is envisioned for future bus traffic in both directions. Initially it will be used for strategically located bus turnouts and additional landscaped right-of-way.

The plan also envisions a transit center incorporated into the MUC-Village Core land use district. Park-and-Ride facilities will be located in the MUC-Community Core land use district or in the commercial zone at Highway 41.

Local (residential) streets are pedestrian oriented, developed with traffic calming measures, and support both front-loading and rear-loading land uses.

The general layout of the backbone road system proposed for Gateway Village is shown in **Figure 8**. As discussed above, alignments shown are schematic, and are subject to revision as subdivision maps are prepared and actual design dimensions are determined.

D. Roundabouts

A significant feature of the proposed transportation system is the use of roundabouts as an element of the Village roadway network. Roundabouts will be used along Root Creek Parkway to provide for unimpeded integration with secondary streets (collectors). They will be used as gateways into neighborhoods they serve and, in smaller configurations, as design elements and traffic calming devices within the neighborhoods.

Roundabouts have a higher vehicle capacity than stop signs or traffic signals, require less maintenance than typical signal controlled intersections, and improve the aesthetics of the area while complementing surrounding streetscapes through island landscaping. Central island landscaping also serves to enhance the safety of the intersection by making the intersection itself a focal point of driver attention, and by reducing the perception of a high-speed through traffic movement.

Roundabouts will be designed in accordance with the Federal Highway Administration publication “Roundabouts: An Informational Guide,” and the Caltrans Standard Specifications.

E. Proposed Street Sections

Cross sections are provided in the IMP Drawings for each proposed road type, showing right-of-way width, pavement width(s), lane configuration, and special features such as median islands, bike trails, and landscape easements where appropriate. Many of these road types differ from roads of similar capacity as shown in the Madera County Standard Drawings. This IMP will govern over the Standard Drawings for all roads constructed within and bounding Gateway Village.

1. Root Creek Parkway

Root Creek Parkway (Type 3 and Type 3-Alt) will be a 4-lane divided street running in a looped configuration south of Avenue 12 to approximately as far south as the Avenue 10-1/2 alignment, and serving most of Gateway Village. It will have two points of connection with Avenue 12, identified as Root Creek Parkway East and Root Creek Parkway West, both of which will ultimately be signalized. Landscape areas will be created in the medians and along both sides of the road. No on-street parking will be accommodated. A separate bikeway/walking trail will be provided parallel to the street itself. As discussed above, Root Creek Parkway East, the easterly leg of the loop, will be configured with additional right-of-way and landscape width, to provide space for a future Transit Corridor.

Access to Root Creek Parkway will be limited. No driveways will be allowed. Product may front onto the parkway, but garages must be rear-loaded through an alley. Intersections along the Parkway will be limited to approximately 1/4-mile spacing, with some flexibility in that minimum to allow for neighborhood design.

Additional streets may intersect the Parkway, but will be limited to right-in, right-out access, or to left-turn access using a directional worm median. In either case, no left turns out of the crossing streets will be allowed.

Root Creek Parkway will be constructed to its ultimate width in several segments, as the phases of development proceed south and west from Avenue 12 and Highway 41. Segments will follow the boundaries of the various phases.

2. Village Collector Streets

Village collector (Type 2) streets will be constructed at the locations shown in **Figure 8**. These will be 2-lane divided streets with a variety of cross-sectional widths and construction details, providing access from the individual neighborhoods to Root Creek Parkway, Avenue 12, Avenue 9 or Avenue 10. Landscape areas will be created in the medians and along both sides of the road. On-street parking will be accommodated in many but not all segments, depending upon the specific road type. See the IMP Drawings.

3. Local Streets

The IMP drawings give several variations of Type 1 street sections, which will serve as local streets within the individual subdivisions. Neighborhood planning is beyond the scope of the IMP. With only a few exceptions, local road alignments are not shown on **Figure 8** but are reserved to the Tentative Map process.

F. Bikeways and Walking Paths

Bikeways and walking paths will be provided along Root Creek Parkway and other open-space routes as shown on the road sections.

Bike/pedestrian trails will also be provided on Secondary streets throughout the project, creating a connected network of trails, facilitating pedestrian and bicycle transportation throughout the development. Most trails will be within road rights of way. Others will be separate trails through open space areas. See the IMP Drawings.

A bikeway will be provided along Avenue 12, in accordance with the County Road Department's adopted Bike Lane plan. See **Appendix L**.

G. Transit Center

In keeping with Neo-Traditional design concepts, Gateway Village includes a Transit Center incorporated into the MUC-Village Core land use district. The Transit Center will be the hub of local and regional transit service, serving all areas within the Village as well as the outlying developments of Rio Mesa and Gunner Ranch West. Its key location, in the Village Core land use district along Avenue 12, will help to minimize traffic congestion within the area by reducing the number and length of automobile trips, thus decreasing air quality impacts. The architectural theme will be consistent with Village construction.

The Transit Center will be linked to Gateway's transportation network via a preserved transit right-of-way located along Root Creek Parkway that will provide two-directional access between housing areas and employment/shopping centers. Bus turnouts will be strategically located along the major project roadways and Village collectors.

Design details of the Transit Center are reserved to final project design. At minimum, the facility will be large enough to support local bus service within southeast Madera County.

At most, the facility may act as a regional hub, offering connecting services to the outlying areas of Madera, Fresno, Coarsegold, Oakhurst and Yosemite. A 3,000 to 15,000 square foot facility would house a ticket office, dispatch center, passenger lobby, public restrooms and general office space for support services.

Additional uses for the Center could include retail space and additional office space compatible with the facility.

H. Park-and-Ride

The park-and ride facility will consist of a 24-hour parking lot with provisions for up to 50 stalls. The facility will be able to accommodate both public transit users and drivers wishing to carpool from the Village. The facility will be located within the MUC-Community Core land use district along Highway 41.

I. Landscaping

The street cross-sections provide landscape areas along the road edges and along the center median, when present, as well.

Landscape and hardscape elements near traffic circles should be selected so that sight distance around traffic circles is maintained, pedestrian traffic within the island is discouraged, and vehicle hazards are avoided.

Specific proposals for landscape design and materials shall be submitted with each phase's improvement plans.

J. Phasing of Roadway Construction

All interior and exterior roads will be constructed in phases along with the build-out of the project. Local (Type 1) roads shall be constructed to their full proposed section complete with landscaping in a single phase.

Type 2, 3, 3 alt, 4 and 5 roads may be constructed partly with one phase and completed in another, so long as traffic capacity as required by the Traffic Impact Study is provided. The provisions of this paragraph may be used to defer construction of lanes, curbs and gutters, and landscaping, as may be appropriate in various situations.

For example, a Type 3 street bounding a subdivision phase may not be initially constructed to its full width. The curb, gutter, sidewalk, landscape area and possibly the number-one lane on the side away from the subdivision may be deferred until development occurs in that area. An exception to that would be when the road is also the boundary of Gateway Village in locations where no further development is planned or approved, in which case full improvements must be built all at one time.

Table 6
Schedule for Construction of Improvements to Internal Road System

Phase	Road	Scope of Improvements
1		Initial access to the northeasterly portion of the phase will be provided from the West Frontage Road and from Avenue 12. The following streets will be built with subsequent maps within Phase 1
	Root Creek Collector (North)	This Type 2 road along the north side of Root Creek will be built from the West Frontage Road to Root Creek Parkway East as subdivision mapping within Phase 1 reaches this alignment.
	Root Creek Parkway East	Will be built from Avenue 12 to Root Creek Collector (North) as subdivision mapping within Phase 1 reaches this alignment. Type 3-Alt.
	East-West Collector	This is the main east-west corridor within Phase 1, Type 2 cross-section, and will be constructed through Phase 1 in three segments: West Frontage to easterly North-South Collector; Easterly N-S Collector to Root Creek Parkway East; Root Creek Parkway East to westerly N-S Collector
2	Unnamed Collectors	Two east-west corridors within Phase 2, Type 2 cross-section, to be constructed as shown on the Circulation Element
	Root Creek Collector (North)	Type 2 road along the north side of Root Creek will be built from Root Creek Parkway East to Root Creek Parkway West
	Root Creek Parkway West	Will be built from Avenue 12 to Root Creek Collector as subdivision mapping within Phase 2 reaches this alignment. Type 3.
3	Central Collector	This Type 2 road running north-south in the center of the phase will be built from Avenue 12 its northern limit as subdivision mapping within Phase 3 progresses.
5	Unnamed Collectors	North-south and east-west corridors within Phase 5, Type 2 cross-section, to be constructed as shown on the Circulation Element
	Root Creek Collector (South)	Type 2 road along the south side of Root Creek will be built from Root Creek Parkway East to Root Creek Parkway West
	Root Creek Parkway East	Complete loop from Root Creek Collector (North) to Avenue 10. Type 3-Alt cross-section.
	Root Creek Parkway West	Complete loop from Root Creek Collector (North) to Root Creek Parkway East. Type 3 cross-section.

Avenue 12 will be constructed in phases. As the development proceeds to build west through Phases 1, 2 and 3, construction will be carried out in logical segments, as set forth in **Table 7** below.

Table 7
Schedule for Construction of Improvements to County Road System

Phase	Road	Scope of Improvements
1	Avenue 12	Highway 41/Avenue 12 intersection improvements, two additional lanes from 41 to Root Creek Parkway East, transition lanes west of Root Creek Parkway East, south side landscaping and decorative wall. No new curb/gutter or median. Lanes shall be constructed to allow for future widening to ultimate lane configuration without demolition of the interim lanes. Wall shall be located at the ultimate right-of-way width (typical, all phases).
	West Frontage Road	Widen west side to Type 3 cross-section from Avenue 12 to south line of Phase 1.
2	Avenue 12	Two additional lanes from RCP East to Road 40, transition lanes west of Road 40, south side landscaping and decorative wall. Curb/gutter from Highway 41 to Road 40
	West Frontage Road	Widen west side to Type 3 cross-section from south line of Phase 1 to Root Creek. Widen east side to Type 3 cross-section from Avenue 12 to Root Creek. Potential traffic signal at intersection with main entrance to the Village (un-named East/West secondary street) if warranted.
	Road 40	Westerly boundary of Gateway Village between Avenue 12 and Root Creek. Type 2 cross-section.
3	Avenue 12	Four additional lanes from 41 to RCP East, transition construction west of RCP east, traffic signals at RCP East and RCP West, median curb and landscaping from 41 to Road 40.
4	Avenue 10	Widen from 2 lanes to 4 lanes from Road 40-1/2 to West Frontage Road, Phase 4. Assumes widening on north side only, with Gunner Ranch having responsibility for south side. Cross section will be Type 4 on north side, travel lanes only on south side.
	West Frontage Road	Construct to Type 3 cross-section from north line of Phase 4 to Avenue 12.
	Road 40-1/2	Southerly extension of Root Creek Parkway, from the parkway loop to Avenue 10. Type 3-Alt cross

section.

- 5 Southbound SR 41 exit Intersection improvements including additional lanes.
at Children's Boulevard

With the exception of Avenues 10-1/2 and 11, which are not part of the project, the existing County roads contiguous with the project will be improved as the phased development proceeds far enough to include the affected road segment. The road segments and the anticipated phase during which they will be approved is set forth in **Table 7**, above.

K. Environmentally-Beneficial Project Features

Landscaping plans will be developed and designed to preserve natural features, as feasible, and will include the use of native species along the project roadways and frontages.

Street lights and project entry signage will be incorporated into the streetscape landscaping and will be designed to blend with the natural features of the site.

Solid fences and walls will be avoided to the maximum extent feasible, except for noise attenuation. Any solid walls or fences used will be colored to blend in with natural surroundings, and will be "softened" with landscaping.

Street lights will high-pressure sodium luminaires, shielded in such a manner that no light is emitted above a horizontal plane.

Dense planting of native landscaping, including shrubs and trees, will be provided along all project primary roads and Root Creek Parkway, as well as along all commercial and employment centers and the Mixed Use land use districts.

Existing County roads surrounding the project will be improved as the project progresses to continue to provide a minimum LOS D on affected segments and intersections.

In addition to the implementation mentioned above, the project's designers will make specific proposals addressing these measures in the construction drawings prepared for each phase of the development, to the satisfaction of the County of Madera.

XI. IMPROVEMENTS TO CALTRANS-OWNED FACILITIES

This section proposes a program of improvements intended to provide full mitigation for project impacts to Caltrans facilities, to the satisfaction of Caltrans.

Caltrans has created a State Route 41 Schedule of Improvements and Phasing Plan (herein "Schedule") meeting this requirement. The Schedule outlines the improvements that are required and when each must be delivered, in terms of the number of project rooftops constructed -

The Traffic Impact Study and the Project Study Report prepared for Caltrans by TPG will contain details about each of the scheduled projects, which are summarized in **Table 8** below.

Table 8
Caltrans Schedule of State Route 41 Improvements

Project Description	Threshold	Phase
Improvements to SR 41/ Avenue 12 intersection including right-turn lanes and double left turn lanes on all legs, signal improvements. Signalization of Avenue 12 and the SR 41 Frontage Road.	Opening Day	1
"Ultimate" intersection improvements at SR 41 and Avenue 12, including additional through lanes and signal modifications.	1,500 units ⁵	2
Construct SR 41 northbound lane from Avenue 11 to Avenue 12, including construction of an additional SR 41 bridge over Avenue 11.	3,000 units	3
Construct SR 41 northbound lane from Fresno County line north to Children's Boulevard interchange	4,000 units	3
Construct SR 41 southbound lane from Fresno County line north to Children's Boulevard interchange	4,900 units	4
Construct 5th and 6th lanes on SR 41 from Avenue 11 to Avenue 12; construct signal improvements at Avenue 12	5,800 units	5

XII. OTHER UTILITIES

Other utilities, including electric power, natural gas, telephone, cable TV, fiber optics) will be provided by extension of facilities by regional utility companies.

⁵ Units of Gateway Village development, not counting other development in the southeast County area.

A. Electric Power and Natural Gas

Electricity and natural gas will be provided by Pacific Gas & Electric Company by extension of lines from the Rolling Hills/Children's Hospital area and from the intersection of Highway 41 and Avenue 12.

B. Telephone/ Internet

Telephone infrastructure will be provided by AT&T, which has lines along Avenue 10 to serve the Brickyard Industrial Park. This infrastructure was planned with the capacity to serve Gateway Village as well. Along with telephone, AT&T offers DSL Broadband Internet Service.

C. Intranet

The Gateway Village will include wiring adequate to allow full interconnection of all houses and community facilities so that residents will have direct access to community information and services on an established Intranet, maintained by the community.

D. Cable TV

Cable TV will be provided by Comcast, or by a private system installed by the developer. Service will be offered concurrent with the first residents, as the Specific Plan's design guidelines will prohibit roof-mounted antennae.

E. Solid Waste Disposal

The County has a franchise agreement with Madera Disposal Service (MDS), providing that MDS has an exclusive right to provide solid waste disposal services in the unincorporated areas of Madera County south and west of the Madera Canal. Gateway Village will be subject to this agreement and expects that MDS will provide once-per-week curbside collection service to all homes and a range of commercial pick-up services to all businesses within the Village.

To enhance Madera County's waste diversion performance under the mandates of AB 939, Gateway Village solid waste customers should be provided with the individual containers required to conduct source-separated recycling. Three containers will be needed for each residential customer: domestic garbage, mixed recycling materials, and green wastes. Each should be collected weekly.

During construction, waste wood, concrete, drywall and roofing materials should be segregated and collected separately for recycling, to avoid sending these materials to landfill.

XIII. FIRE PROTECTION

A. General

Madera County Fire Department, through contract with the California Department of Forestry (CDF) provides fire protection services in unincorporated areas of Madera County. The project site is not located in a fire hazard zone or in a State Responsibility Area. The Developer will enter into contract with Madera County Fire Department and/or CDF directly to provide fire protection services within the project area. The agreement shall provide that existing fire protection services to other areas of responsibility are not adversely affected by the project.

There are two established fire stations in the vicinity of the project site. These are shown on **Figure 9**. The proximity of Fire Stations 9 and 19 will allow Gateway Village to easily comply with County Planning Policy 3.H.2, which calls for a maximum average first-alarm response time of 15 minutes in suburban areas.

B. Fire Station 9

Fire Station 9 is located on Avenue 11 in Rolling Hills, approximately 1/2 mile west of Highway 41 and one mile south of Avenue 12. There will be no connection between Avenue 11 and the Gateway Village circulation system. This means the Fire Department's response distance to the center of the project is approximately 2-1/2 miles, or approximately seven minutes. Response time to the proposed Phase 1 area south of Avenue 12 and west of the Highway 41 frontage road will average less than five minutes.

C. Fire Station 19

Fire Station 19, Bonadelle Ranchos, is located on Road 36 near Avenue 15, approximately five miles west and three miles north of the project site. Travel time to the site is approximately eleven minutes.

D. ISO Rating of the Fire Response System

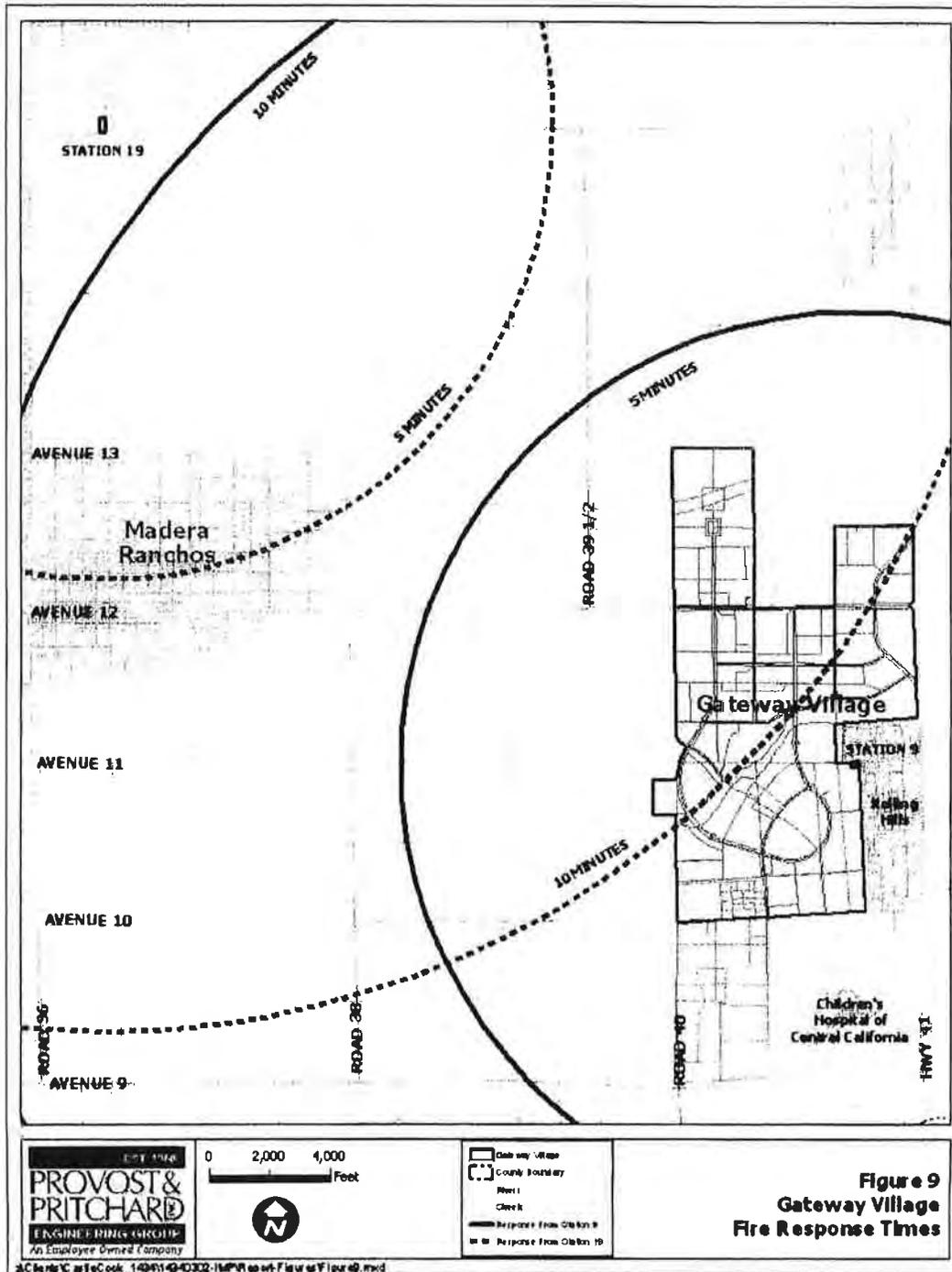
Compliance with County Planning Policy 3.H.1 would mean raising the ISO rating of the site from its current level of ISO 9 to the policy-recommended ISO 6. ISO ratings are calculated depending upon a number of factors. Among these are average first alarm response time, size and type of available fire-fighting staff, available fire flow, and reliability of water supply.

Provision of a municipal water supply capable of meeting the fire flow, back-up storage and stand-by power generation requirements set forth in this IMP will give the Madera County Fire Department the infrastructure and equipment needed to achieve the desired ISO rating for the project area.

E. Proposed Facilities

Gateway Village will be constructed in phases, and so will have initially only incremental impacts upon the existing fire protection infrastructure in the area. Because of its proximity to Fire Station 9, no additional facilities are anticipated with the first phase, other than the construction of a water system, storage and back-up power facilities as outlined in this IMP.

All commercial, industrial and institutional facilities will have fire sprinklers.



F. Development Triggers

As the development proceeds toward build-out, additional equipment and staffing within Fire Station 9 may be required.

Alternatively, Fire Station 9 may be closed at the direction of the County. Should that be the case, a new fire station site would be required. This site could be located on Gateway Village property (perhaps near the intersection of Avenue 12 and State Route 41), or could be on neighboring property within the Gunner Ranch West development. Once the County determines its preferred site for the station, more detailed plans can be developed. Gateway Village will participate in a pro-rata share of the cost of construction of the new station, on a per-unit or per dwelling basis to be determined after additional study by the County.

XIV. PUBLIC SAFETY

A. General

Law enforcement in the unincorporated areas of Madera County is provided by the Madera County Sheriff's Department. The Department has set a goal of maintaining a ratio of 1.25 sworn officers per 1,000 population county-wide. Currently the ratio is nearer 1.1 per 1,000. With the estimated population of Gateway Village at build-out approximately 19,600, the Sheriff's Department will require an additional 25 sworn officers to meet its ratio goal.

The Developer will enter into contract with Madera County Sheriff's Department to provide law enforcement services within the project area. The agreement shall provide that existing law enforcement services to other service areas are not adversely affected by the project.

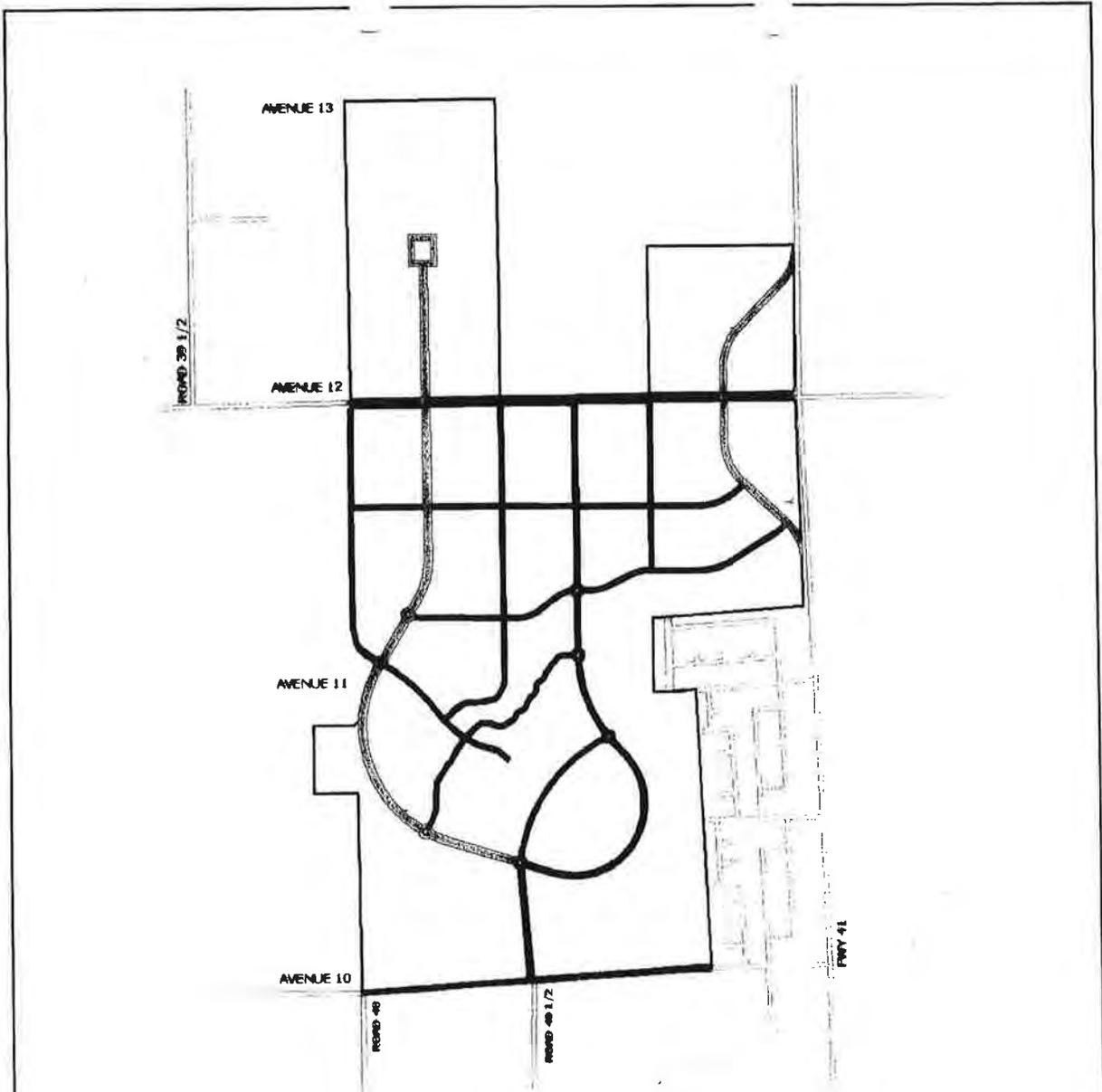
As with fire protection, the impact of this project will be incremental. The first 1,000 population (approximately 300 houses) would require only one additional officer to meet the ratio goal.

B. Proposed Facilities

C. Development Triggers

D. Environmental Compliance

The developer plans to enter into an agreement with Madera County Sheriff's Department for the provision of law enforcement services within the project, prior to approval of subsequent Tentative Maps and/or non-residential development within the project area.



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