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RESOLUTION NO.: 2008- 72

A RESOLUTION OF THE BOARD OF SUPERVISORS OF PIMA COUNTY, ARIZONA; RELATING TO PLANNING; AMENDING COMPREHENSIVE PLAN REGIONAL PLAN POLICY 3, WATER RESOURCES ELEMENT, FOR ALL OF PIMA COUNTY.

BE IT RESOLVED BY THE BOARD OF SUPERVISORS OF PIMA COUNTY, ARIZONA AS FOLLOWS:

Section 1. As referenced in **Co7-07-04** Comprehensive Plan Regional Plan Policy 3, Water Resources Element, is amended to read as follows:

A. Policy Intent

The intent of the Water Resources Element Regional Plan policies is:

- to provide pertinent information in a timely fashion to land-use decision-makers about the impacts and sustainability of water resources development;
- to promote the efficient utilization of existing infrastructure and the prudent construction of additional infrastructure needed for a safe, reliable and renewable water supply;
- to increase reliance upon renewable water supplies;
- to minimize impacts of water supply development upon existing and future residents of Pima County; and
- to protect the groundwater-dependent ecosystems of Pima County, including springs, perennial and intermittent streams and shallow groundwater areas.

B. Regional Policies

1. County staff shall conduct a Water Supply Impact Review on proposed Comprehensive Plan amendments that are larger than four acres and make recommendations. The review and recommendation will evaluate five critical issues on existing water infrastructure and potential environmental constraints of the site:

4-10-08 10:00 AM

- a. Water service and renewable water supply options
- b. Current and projected depth to groundwater and groundwater trend data
- c. Proximity to areas of known or potential ground subsidence
- d. Proximity to known groundwater-dependent ecosystems
- e. Location within a hydrogeologic basin, including depth to bedrock

Staff conducting the Water Supply Impact Review may recommend plan amendments that are expected to have no adverse impacts. The review and recommendation will be included in the staff report for Comprehensive Plan amendments.

- 2. PCRFC staff shall conduct a Water Resource Impacts Assessment on any rezoning that requires a Site Analysis. The Assessment shall include a review of the five critical issues described above, plus the information provided by the applicant in the Preliminary Integrated Water Management Plan.
- 3. A Preliminary Integrated Water Management Plan (PIWMP) shall be required for any rezoning that requires a Site Analysis. The PIWMP shall include the following:
 - a. A description of the water supply options;
 - b. A description of where the proposed rezoning will occur geographically based upon its proximity to existing and planned renewable supply and potable water supply infrastructure and defined water service area boundaries; and
 - c. Water demand projections for the development, based upon the *existing and proposed* zoning. Water demand projections for the *proposed* zoning shall be generated, using:

http://www.azwater.gov/WaterManagement_2005/Content/OAAWS/Generic_Demand_Calculator10.xls

- d. For rezoning proposals whose water demand projections at full build-out are more than five (5) acre-feet and less than 20 acre-feet per year, the PIWMP shall include:
 - 1) An analysis of water level trends in the area from which groundwater shall be withdrawn for the service to the development and depth to groundwater at the nearest existing well location
(<http://www.sahra.arizona.edu/wells/>);
 - 2) The location of the development relative to all groundwater-dependent ecosystems including: springs, perennial streams, intermittent streams and shallow groundwater areas as mapped on the Sonoran Desert Conservation Plan GIS database
(<http://www.dot.pima.gov/cmo/sdcpmaps/>);
 - 3) A plan for the location of all wells, existing and proposed, that may be used to supply water to the development, including ADWR well registry numbers for existing wells;

- e. For rezoning proposals whose water demand projection at full build-out is 20 acre-feet or more and less than 50 acre-feet per year, the PIWMP shall include:
 - 1) All of the information required for developments with a water demand projection at full build out of less than 20 acre-feet (Section B.3.d, above); and,
 - 2) Existing site-specific geologic and hydrogeologic studies available for the area from which groundwater will be withdrawn to serve the project;
 - 3) Any existing aquifer test, pump test or production well data available for the area;

- f. For rezoning proposals whose water demand projection at full build-out is 50 acre-feet per year or more, the PIWMP shall include:
 - 1) All of the information required for developments with a water demand projection at full build out of less than 50 acre-feet per year (Section B.3.e, above); and
 - 2) A draw-down analysis for impact of water demand of the development's proposed wells within the 10-foot draw down contour after five years of pumping at full build-out; and
 - 3) A feasibility study examining the cost and means to deliver renewable and potable water to the development after full build out, OR the applicant may provide a statement declaring no feasibility study has been conducted. Statement will not bar rezoning approval, but will be weighed in the staff's recommendation.

C. Rezoning Policies

- 1. Comprehensive Plan rezoning policies are proposed for potential future rezoning conditions. Rezoning policies are needed to address the demand for water that will result from future growth projected in the county plan, added to existing uses. One or more of the following rezoning policies shall be implemented:
 - a. Applicants whose proposed rezoning site will be served by an existing water provider with physical access to a renewable and potable water supply shall provide written proof to that effect as a condition of rezoning.
 - b. Applicants whose proposed rezoning site will connect to a water provider with physical access to a renewable and potable water supply in the future shall provide written documentation showing intent to connect as a condition of rezoning.

PLANNING DEPARTMENT

- c. Rezoning proposals without physical access to renewable and potable water supply shall not be recommended for approval by staff until such a time as renewable and potable water supply is available in the area, unless it can be shown that the increased water demand projections will not have significant water resource impacts based on staff analysis of the five critical issues that are described in Section B.1, above.
- d. All rezoning proposals shall include implementation of water conservation measures. These may include measures as provided in Section D, Water Conservation Measures and Management Tools, below. The water conservation measures listed in the rezoning proposal shall become conditions of rezoning. Water conservation measures will be evaluated based on the severity of the water supply constraints of the entire rezoning proposal.
- e. Water demand projections showing water demand below the average estimates for similar land use types shall be required to list water conservation measures or methods that are proposed to achieve the lower water demand. Implementation of water conservation measures listed in the rezoning proposal shall become conditions of rezoning.
- f. Staff may not recommend approval of rezoning proposals if they increase the water demand projections in areas that are less than five miles from a groundwater dependent ecosystem and if the development will have an adverse impact on the groundwater dependent ecosystem.
- g. Rezoning requests proposing to employ water conservation measures for individual properties such as landscaping restrictions or private pool regulations shall be required to include the restriction in the Covenants, Codes, and Restrictions (CC&Rs).
- h. Rezoning proposals that increase the water demand above existing zoning shall be fully offset in areas of shallow groundwater (less than 50 feet below the land surface). Increases in water demand shall be offset by recharge, legal and verifiable water rights, or retirement or purchase of water rights from within the same or up-gradient shallow groundwater area.
- i. Rezoning proposals shall not increase the water demand above existing zoning in areas of Isolated Basins. Any increases in water demand shall be fully offset from within the same hydrogeologic basin by recharge, legal and verifiable water rights, or retirement or purchase of water rights.
- j. Rezoning proposals that rely on use of groundwater withdrawn from a five-mile radius of mapped groundwater-dependent ecosystems shall

include a hydrologic impact analysis to show how groundwater withdrawn for the development may impact ecological assets. Rezoning proposals that may adversely impact groundwater-dependent ecosystems shall employ pump tests and monitoring, and use avoidance strategies, including well site selection and screening of wells.

- k. Rezoning proposals that are located in areas that will not be served by a water provider with physical access to a renewable and potable water supply and are located in subsidence areas shall employ mitigation measures to minimize subsidence in the area. Mitigation measures that may be used to minimize subsidence in groundwater-dependent areas and areas located in high subsidence potential areas include:
 - 1) Enhance net recharge of storm water runoff in the affected area.
 - 2) Fund construction of recharge facilities in the affected area.
 - 3) Fund construction of infrastructure to connect with a regional water supply infrastructure having access to renewable supplies.
- l. A Final Integrated Water Management Plan (FIWMP) shall be submitted at the tentative plat or development plan stage of a proposed project for which a rezoning has been approved. The FIWMP should include proposed uses of all legally available water resources and pertinent details of reuse, replenishment, conservation and use of renewable supplies of water, all designed to minimize impacts to the aquifer.

D. Water Conservation Measures and Management Tools

- 1. The following Water Conservation Measures may be used by all new development in order to promote the efficient use of all water supplies and should be considered in context of mitigation of increased water demand projected between existing zoning and proposed rezonings.
 - a. Site Planning:
 - 1) Implement rainwater/storm water harvesting and reuse strategies.
 - 2) Implement swimming pool and spa water conservation measures.
 - 3) Implement effluent reuse strategies within the development.
 - 4) Install reclaimed effluent irrigation (where available) for individual properties and common areas.
 - 5) Install drought-tolerant native vegetation and drip irrigation systems with timers and rain sensors.
 - 6) Co-locate parks in development detention basins.
 - 7) Minimize impervious surfaces to maximize storm water infiltration.
 - b. Residential/Commercial and Buildings, including the above strategies at the residence/building scale and:
 - 1) Install gray water reuse plumbing systems.

PLANNING DEPARTMENT

- 2) Install water efficient appliances and fixtures and automatic faucets, water-free urinals and/or dual flush toilets in common use buildings.
- 3) Install plumbing systems that drain pools into the sewer.
- 4) Limit private pool and spa construction.
- 5) Install sub-metering for each tenant for multi-family and multi-occupancy commercial buildings.
- 6) Provide “water-wise” or similar water conservation information as part of sales contracts to home buyers.

2. The following Management Tools may be used by Pima County in moving towards a more sustainable water future include:

- a. Consider the water use requirements of current and future residents of the area, as well as other needs, including the natural environment.
- b. Work with neighboring counties to evaluate and provide input on water-resource impacts of development in adjacent jurisdictions, in accordance with State Statutes.
- c. Maintain an inventory of County water resource assets including groundwater rights, surface rights and production and use of effluent to sustain and protect the County’s natural environment.
- d. Maximize acquisition of County water resource assets including groundwater rights, surface rights and production and use of effluent to sustain and protect the County’s natural environment.
- e. Amend land use regulations to require that all new houses discharging to septic systems also be provided with a gray water reuse system.
- f. Revise design and construction standards to capture and mitigate storm water generated on-site for water harvesting and the incorporation of light-colored permeable materials into the pavement of parking lots and roads, to reduce heat-island effects, water runoff and dust emissions.
- g. Limit pumping near shallow groundwater areas of regional importance – Methods for implementing this strategy include land use controls and the purchase of development and water rights.
- h. Maximize use of CAP, rainfall, runoff and reclaimed water – Implementation methods might include County-sponsored, multi-purpose recharge and reuse projects, limitations on rezonings outside the service area and incentives to landowners.

- i. Limit human groundwater use in certain areas – Implementation methods might include limitations on rezonings outside the service area and incentives to landowners.
- j. Protect and promote natural recharge functions of watercourses – Implementation methods include floodplain management, land acquisition and land use decisions to minimize floodplain encroachments and maintain natural hydraulics and hydrology.
- k. Utilize effluent and surface water for riparian restoration – Preservation of current discharges to the environment, storm water harvesting, repair of altered flow paths and allocation of the water resources to riparian preservation and restoration are favored implementation methods. County effluent uses shall sustain and protect the County’s natural environment.
- l. Reduce per capita consumption – Implementation methods might include landscape requirements and requirements for conservation features in new housing.
- m. Limit turf water use – Limit the establishment of golf course uses and requirements that new courses use non-groundwater sources and limitations on the use of turf:
 - 1) Grass is only to be used for functional purposes.
 - 2) No lawns for decorative uses.
 - 3) Plant only low water using turf.
 - 4) Rely on rainfall as primary irrigator.
 - 5) Set irrigation system timers or clock to manual only.
 - 6) Landscape with drought tolerant, native plants – the following link includes a list of plants which are native to Pima County: <http://www.pima.gov/cmo/sdcp/species/plants.html>
- n. Prevent subsidence – Implementation strategies include substitution of renewable supplies for groundwater and recharge in subsidence-prone areas.
- o. Restore and preserve natural areas – Implementation of this strategy could include floodplain acquisition, improvements to the floodplain management ordinance, purchase of development and water rights and limitations on rezonings.
- p. Rehabilitate or create wetlands and riparian areas – Use of reclaimed water, surface runoff and CAP is suggested. Multi-purpose recharge or water quality improvement projects are also suggested as an implementation method to realize this strategy.

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- q. Balance the water budget of Isolated Basins – Pursue options such as purchase of development or water rights and limitations on rezonings consistent with sustainable yield.
- r. Implement a Water Supply Impact Review on rezoning proposals on property where the water system(s) that serve less than 15 homes, where such proposals will demonstrate to Pima County Department of Environmental Quality that it could serve an increased water demand before being approved. Potable water supply requirements for systems involving fewer than 15 homes will be developed as a condition of rezoning.
- s. Domestic Water Improvement Districts (DWID) – Develop a board policy requiring consideration of the renewable supplies, available infrastructure, groundwater trends, subsidence, groundwater-dependent ecosystems and isolated basins in the development and approval of any new DWID.
- t. Research and determine if a Zoning Code Text Amendment should be proposed for enacting Water Conservation Measures.

E. Definitions

Adverse Impact means the lowering of a piezometric surface in the area occupied by a groundwater-dependent ecosystem, or diversion of regional groundwater flows or sources of recharge away from a groundwater-dependent ecosystem.

Final Integrated Water Management Plan means a plan detailing proposed water resources, reuse, replenishment, conservation and use of renewable water supplies for the tentative plat or development plan stage of a proposed project.

Groundwater-dependent ecosystem means shallow groundwater areas, springs and intermittent and perennial streams that are not effluent-dominated, as mapped by Pima County.

Isolated Basins means all hydrologic basins in Pima County except the Tucson and Avra basins.

Preliminary Integrated Water Management Plan means a plan identifying all sources and uses of water intended for, and water demand projections based upon, a proposed rezoning.

Renewable and Potable Water means a quality of water suitable for essential human uses such as drinking, cooking or cleaning, which is derived from a renewable source. In the manner used in this policy, treated surface water, including treated Central Arizona Project water, is considered renewable and potable, but effluent and groundwater are not.

Subsidence Area means a lowering of the land surface more than 3 inches as mapped by U.S. Geological Survey.

Water Resource Impacts Assessment means the review County staff performs on proposed rezoning applications.

Water Supply Impact Review means the review County staff performs on a proposed Comprehensive Plan amendment.

Section 2. This Resolution shall become effective on the date of adoption.

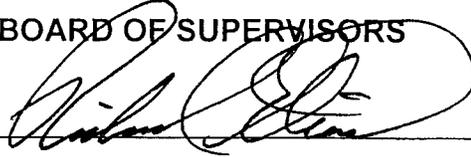
PASSED AND ADOPTED this 1st day of April, 2008, by the Board of Supervisors of Pima County, Arizona.

ATTEST:



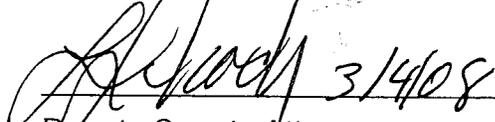
Clerk, Board of Supervisors

BOARD OF SUPERVISORS



Chairman, Board of Supervisors
4/1/08

APPROVED AS TO FORM:



Deputy County Attorney

APPROVED:



Executive Secretary
Planning and Zoning Commission

2008 APR 01 10:11 AM



MEMORANDUM

Water Resources

Regional Flood Control District



August 28, 2008

TO: Pima County Development Services **FROM:** Frank Postillion CGWP,
Chief Hydrologist

SUBJECT: Co7-08-02 Monument West Estates L.L.C.

A Water Supply Impact Analysis has been conducted on proposed General Plan Amendment CO7-08-02 Monument West Estates L.L.C. for Pima County. Pima County conducts a Water Supply Impact Analysis on Comprehensive Plan Amendments 4 acres or greater regarding how the proposal would affect five critical issues.

| PIMA COUNTY'S WATER SUPPLY IMPACT ANALYSIS | | |
|--|---|---|
| | CRITICAL ISSUE | RESPONSE |
| 1. | Water Service and Renewable Water Supply Options | The proposed plan amendment area intends to connect to the Avra Water Co-Op (AWC). Presently, the AWC does not have access to a renewable and potable water supply. The applicant will be applying for a Certificate of Assured Water Supply. The closest recharge facility is Tucson Water's Central Avra Valley Storage And Recovery Project (CAVSARP) within one mile and up gradient of the AWC Service area. The Lower Santa Cruz Replenishment Project operated by the Central Arizona Project (CAP) is 5 miles downgradient of the AWC Service area. |
| 2. | Current and Projected Depth to Groundwater and Groundwater Trend Data | The average depth to groundwater in this area is approximately 410 feet. Groundwater at this depth is not likely to support vegetation or aquatic ecosystems. Groundwater levels have recovered in the area between 1967 and 2007 as much as 75 feet. Groundwater levels are projected to recover by 25 feet over the next 25 years. |
| 3. | Proximity to Areas of Known or Potential Ground Subsidence | The proposed plan amendment is near an area of subsidence from 2-3 inches from 1987-2005 for the provider, AWC. |
| 4. | Proximity to known Groundwater-Dependent Ecosystems | There are no groundwater dependent ecosystems within five miles of the proposed plan amendment site. |
| 5. | Location within a Hydrogeologic Basin, including Depth to Bedrock | The proposed plan amendment is located in the Avra Hydrogeologic Basin. This basin has not been identified as being sensitive to groundwater removal. Depth to bedrock ranges from 700-1200 feet deep. |

Pima County's Water Supply Impact Analysis finds that this Plan Amendment does not presently have access to renewable and potable water. However, it is in an area where groundwater has been recovering and is projected to continue to recover.

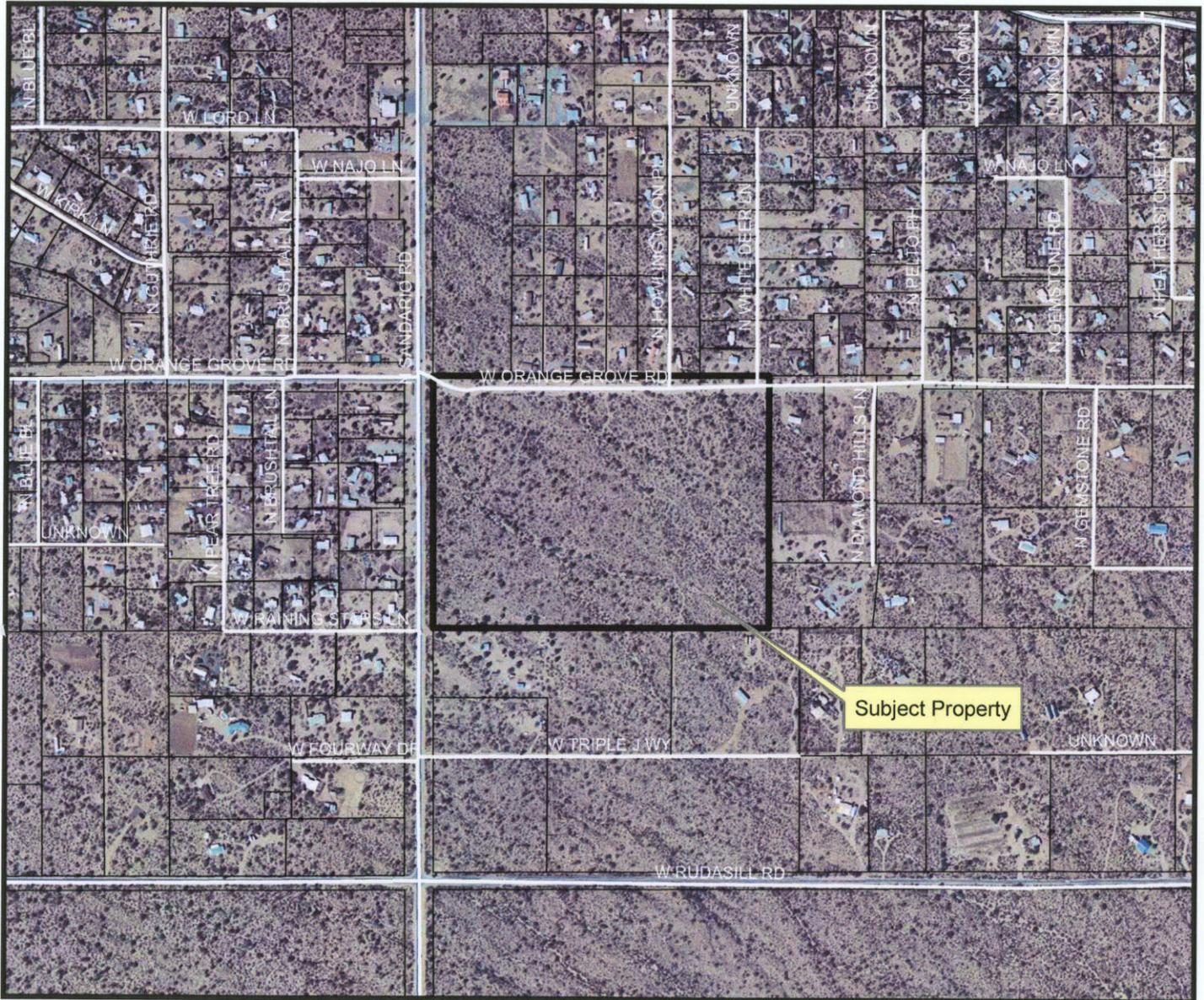
Based on this analysis, we recommend **the following as a Rezoning Policy** should the Board of Supervisors approve this plan amendment:

- The applicant should be encouraged to participate in the Central Arizona Groundwater Replenishment District (CAGRDR) to replenish water use. Replenishment will likely occur at LSCR, 5 miles downstream, unless CAGRDR can arrange to recharge in CAVSARP due to its proximity to the AWC. The applicant is requested to discuss in writing with CAGRDR their desire to have their replenished water recharged at CAVSARP.

If you have any questions or comments please feel free to contact me.

COMPREHENSIVE PLAN AMENDMENT

Aerial View



| | | |
|---|--|---|
| Taxcodes: 213-14-0160 | CO7-08-02 MONUMENT WEST ESTATES, LLC - N. SANDARIO ROAD PLAN AMENDMENT Amend from Resource Transition (RT) to Medium Intensity Rural (MIR) (53.3 acres) | Located at the southeast corner of N. Sandario Road and W. Orange Grove Road. |
|  | Tucson Mountains / Avra Valley Subregion T13S, R11E, Section 10 |  |
| P&Z Hearing Date: September 24th, 2008 | Scale - 1:10,000 | |
| BOS Hearing Date: November 18th, 2008 | Date | |



MEMORANDUM

Water Resources

Regional Flood Control District



December 30, 2008

TO: Pima County Development Services **FROM:** Frank Postillion CGWP,
Chief Hydrologist

SUBJECT: Pomegranate Farms Specific Plan Water Supply Impact Analysis

A Water Supply Impact Analysis has been conducted on the proposed Pomegranate Farms Specific Plan for Pima County. Pima County conducts a Water Supply Impact Analysis on proposed Specific Plans and how the proposal would affect five critical issues.

| PIMA COUNTY'S WATER SUPPLY IMPACT ANALYSIS | | |
|--|---|--|
| | CRITICAL ISSUE | RESPONSE |
| 1. | Water Service and Renewable Water Supply Options | The proposed specific plan area is to be provided water from The Diablo Village Water Company (DVWC) who will need to expand its service area at least one mile to the west. DVWC does not have access to a renewable and potable water supply unless they use an inter-connect with Tucson Water (TW). The TW service area is ¼-mile north of the Specific Plan area. Presently, TW has access to a renewable and potable water supply. The closest recharge facility is the TW Southern Avra Valley Storage and Recovery Project (SAVSARP), approximately 5-miles northwest of the Specific Plan area. TW recharges CAP water and produces a mixture of recharged CAP and groundwater. |
| 2. | Current and Projected Depth to Groundwater and Groundwater Trend Data | The average depth to groundwater in the DVWC area is approximately 480 feet. Groundwater at this depth is not likely to support vegetation or aquatic ecosystems. Groundwater levels have declined approximately 2 feet/year in the area over the last 30 years. Groundwater levels in the Specific Plan area are projected to decline by 18 feet over the next 18 years. In the area of TW area of recovery (SAVSARP), groundwater levels are expected to recover by as much as 1 foot/year |
| 3. | Proximity to Areas of Known or Potential Ground Subsidence | The proposed plan amendment is in an area of high subsidence of 3-4 inches from 1987-2005. |
| 4. | Proximity to known Groundwater-Dependent Ecosystems | There are no groundwater dependent ecosystems within five miles of the proposed plan amendment site. |
| 5. | Location within a Hydrogeologic Basin, including Depth to Bedrock | The proposed plan amendment area is located in the Avra Hydrogeologic Basin. This basin has not been identified as being sensitive to groundwater removal. Depth to bedrock ranges from 700-1200 feet deep. |

Pima County's Water Supply Impact Analysis finds that this proposed Specific Plan, under current conditions, **does not presently have potential access to renewable and potable water unless it receives a supply from TW**. It is in an area where groundwater has been declining and is projected to continue to decline. In addition, subsidence has been high. If the applicant joins the CAGR, the CAP water recharged for the proposed specific plan area will be over 20 miles hydrologically downgradient of the site and will not provide direct replenishment in the area of hydrologic impact.

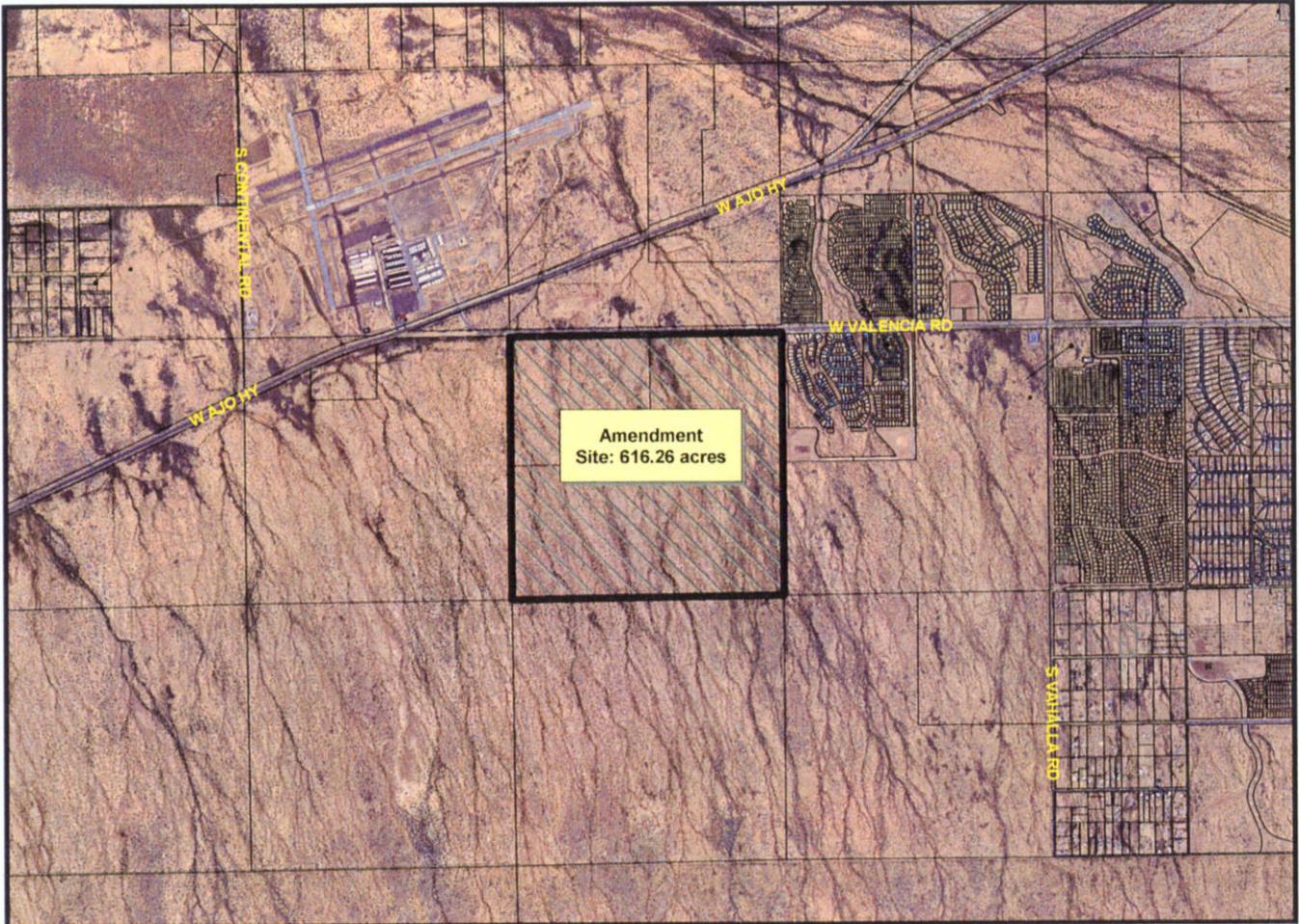
Based on this analysis, we recommend **the following as a Rezoning policy** should the Board of Supervisors approve this Specific Plan:

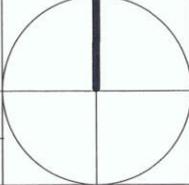
- A letter of intent to serve from a water service provider shall be submitted as part of any subsequent actions. If the letter of intent to serve is from a water service provider that does not have access to a renewable and potable water supply, the applicant will provide documentation as to why a water service provider with access to a renewable and potable water source is not able to provide service.
- The applicant has stated in the specific plan proposal that a Preliminary Integrated Water Management Plan (PIWMP) will be provided. The applicant will at the second tier of Design Standards for Pomegranate Farms, provide water conservation methods and quantify the water savings as part of the PIWMP.

If you have any questions or comments please feel free to contact me.

COMPREHENSIVE PLAN AMENDMENT

Aerial Map



| | | | |
|---|---|---|---|
| <p>Tax Codes: 210-40-023A: 210-40-022A</p> | <p>Co7-06-12 ARBOREAL AGRICULTURAL RESOURCES, LLC - AND POMEGRANATE FARMS I, LLC - W. VALENCIA ROAD MAJOR PLAN AMENDMENT</p> <p>Amend from Low Intensity Urban 0.3 (LIU-0.3) to Medium Intensity Urban (MIU) and Community Activity Center (CAC)</p> | <p>Located on the south side of Valencia Road, approximately 2,000 feet east of Ajo Highway</p> | |
|  | <p>Southwest Subregion</p> | |  |
| <p>P&Z Hearing Date: October 25, 2006</p> | <p>Scale: 20,000</p> | | |
| <p>BOS Hearing Date: December 5, 2006</p> | <p>Date: August 21, 2006</p> | | |



MEMORANDUM

Water Resources

Regional Flood Control District



August 27, 2008

TO: Pima County Development Services **FROM:** Frank Postillion CGWP,
Chief Hydrologist

SUBJECT: Co7-08-03 Sisters of Immaculate Heart of Mary, N. Sabino Canyon Road
Plan Amendment

A Water Supply Impact Analysis has been conducted on proposed General Plan Amendment CO7-08-03 Sisters of Immaculate Heart of Mary, N. Sabino Canyon Road Amendment for Pima County. Pima County conducts a Water Supply Impact Analysis on Comprehensive Plan Amendments 4 acres or greater regarding how the proposal would affect five critical issues.

| PIMA COUNTY'S WATER SUPPLY IMPACT ANALYSIS | | |
|--|---|---|
| | CRITICAL ISSUE | RESPONSE |
| 1. | Water Service and Renewable Water Supply Options | No water supply options are mentioned in the application. The proposed plan amendment area is within the Metropolitan Domestic Water Improvement District (MDWID) Service Area. The Tucson Water (TW) service area is immediately north of the amendment area. MDWID does not have access to renewable and potable water supply in this portion of its service area unless it uses its interconnect with TW. Presently, TW does have access to a renewable and potable water supply (CAP in the Avra Valley). In this area, TW may pump from local ground-water wells due to system limitations in boosting a blend of CAP and groundwater from the Avra Valley (Clearwater). However, a blend of Clearwater and local groundwater will be provided. |
| 2. | Current and Projected Depth to Groundwater and Groundwater Trend Data | The average depth to groundwater in this area is approximately 50 feet. Groundwater at this depth is likely to support vegetation or aquatic ecosystems. Groundwater levels have declined in the area between 1960 and 2005 as much as 1 foot/year. Groundwater levels are projected to recover by 25 feet over the next 25 years. |
| 3. | Proximity to Areas of Known or Potential Ground Subsidence | The proposed plan amendment is not in an area of high subsidence |
| 4. | Proximity to known Groundwater-Dependent Ecosystems | The proposed plan amendment area is within 1/2-mile of a groundwater dependent ecosystem. The provider wells (MDWID) are within a groundwater dependent ecosystem. |
| 5. | Location within a | The proposed plan amendment is located in the Tanque Verde |

| | | |
|--|---|---|
| | Hydrogeologic Basin, including Depth to Bedrock | Sub-Basin area of the Tucson Hydrogeologic Basin area. This sub-basin has been identified as being sensitive to groundwater removal. Depth to bedrock in this area is estimated at greater than 1000 feet. |
|--|---|---|

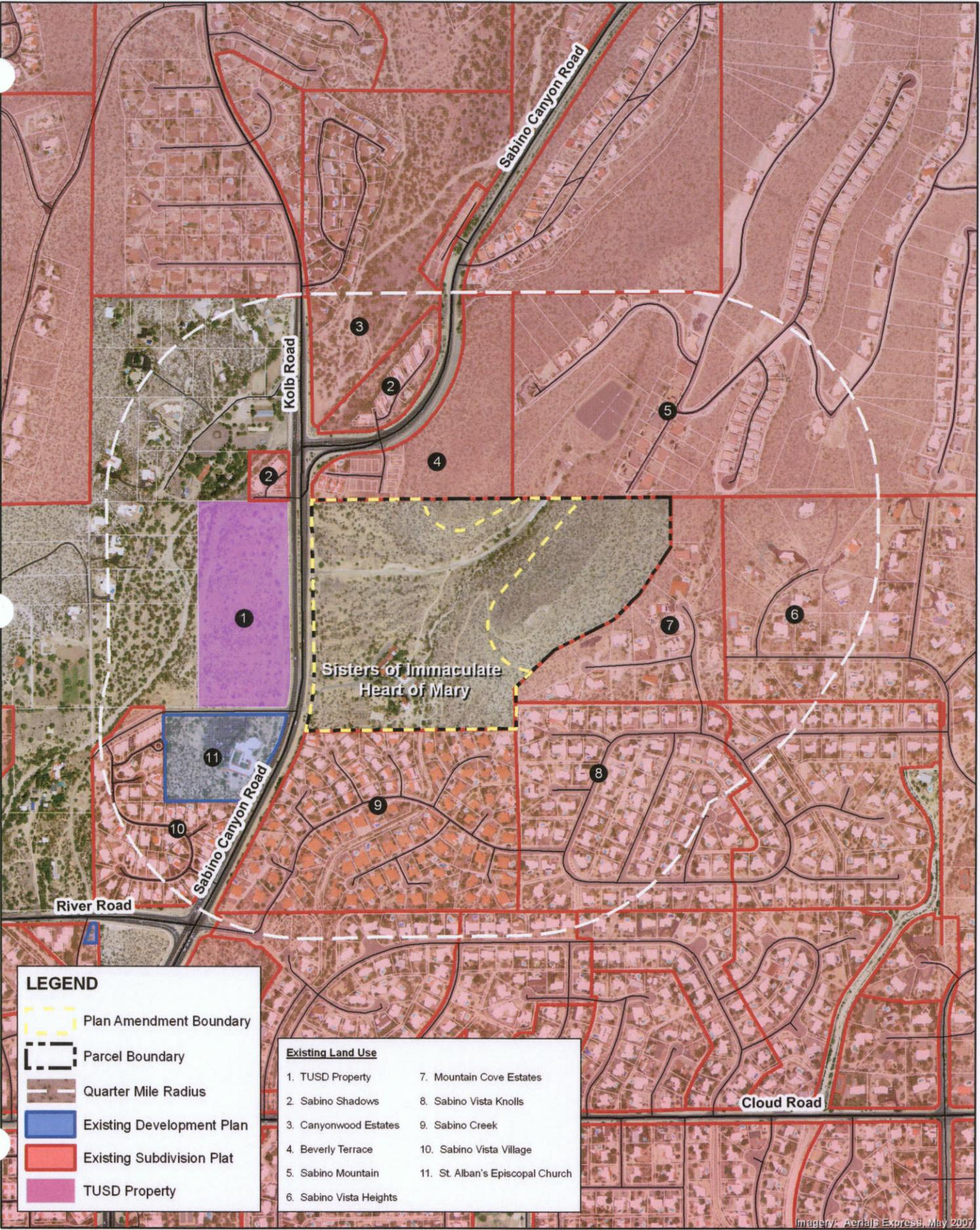
Pima County's Water Supply Impact Analysis finds that, under existing conditions, the Plan Amendment property does not have access to renewable and potable water unless MDWID uses its interconnect with Tucson Water in this area. Tucson Water may in the future provide more water that is from a renewable source when infrastructure can boost the Avra Valley groundwater–CAP blend (Clearwater) to the area. For now, groundwater and the Clearwater blend will be provided for the area.

The proposed amendment area is close to (1/2-mile) a groundwater dependent ecosystem. The area is also where groundwater has been declining but is projected to recover as Tucson Water reduces pumping from area wells and provides more Clearwater blend.

Based on this analysis, we recommend **the following as a Rezoning policy** should the Board of Supervisors approve this plan amendment:

- A letter of intent to serve from a water service provider shall be submitted as part of any subsequent rezoning application. If the letter of intent to serve is from a water service provider that does not have access to a renewable and potable water supply, the applicant will provide documentation as to why a water service provider with access to a renewable and potable water source is not able to provide service.

If you have any questions or comments please feel free to contact me.



LEGEND

- Plan Amendment Boundary
- Parcel Boundary
- Quarter Mile Radius
- Existing Development Plan
- Existing Subdivision Plat
- TUSD Property

| Existing Land Use | |
|-------------------------|----------------------------------|
| 1. TUSD Property | 7. Mountain Cove Estates |
| 2. Sabino Shadows | 8. Sabino Vista Knolls |
| 3. Canyonwood Estates | 9. Sabino Creek |
| 4. Beverly Terrace | 10. Sabino Vista Village |
| 5. Sabino Mountain | 11. St. Alban's Episcopal Church |
| 6. Sabino Vista Heights | |

SISTERS OF IMMACULATE HEART OF MARY

Pima County's Water Supply Impact Analysis finds that this General Plan Amendment does not presently have access to renewable and potable water. It is in an area where groundwater has declined and is projected to decline. The site lies within five miles of the Sid Simpson spring, a groundwater dependent spring located in the Sierrita Mountains. However, it is not clear where the source of water for the site will be located.

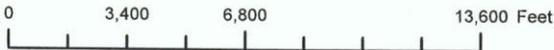
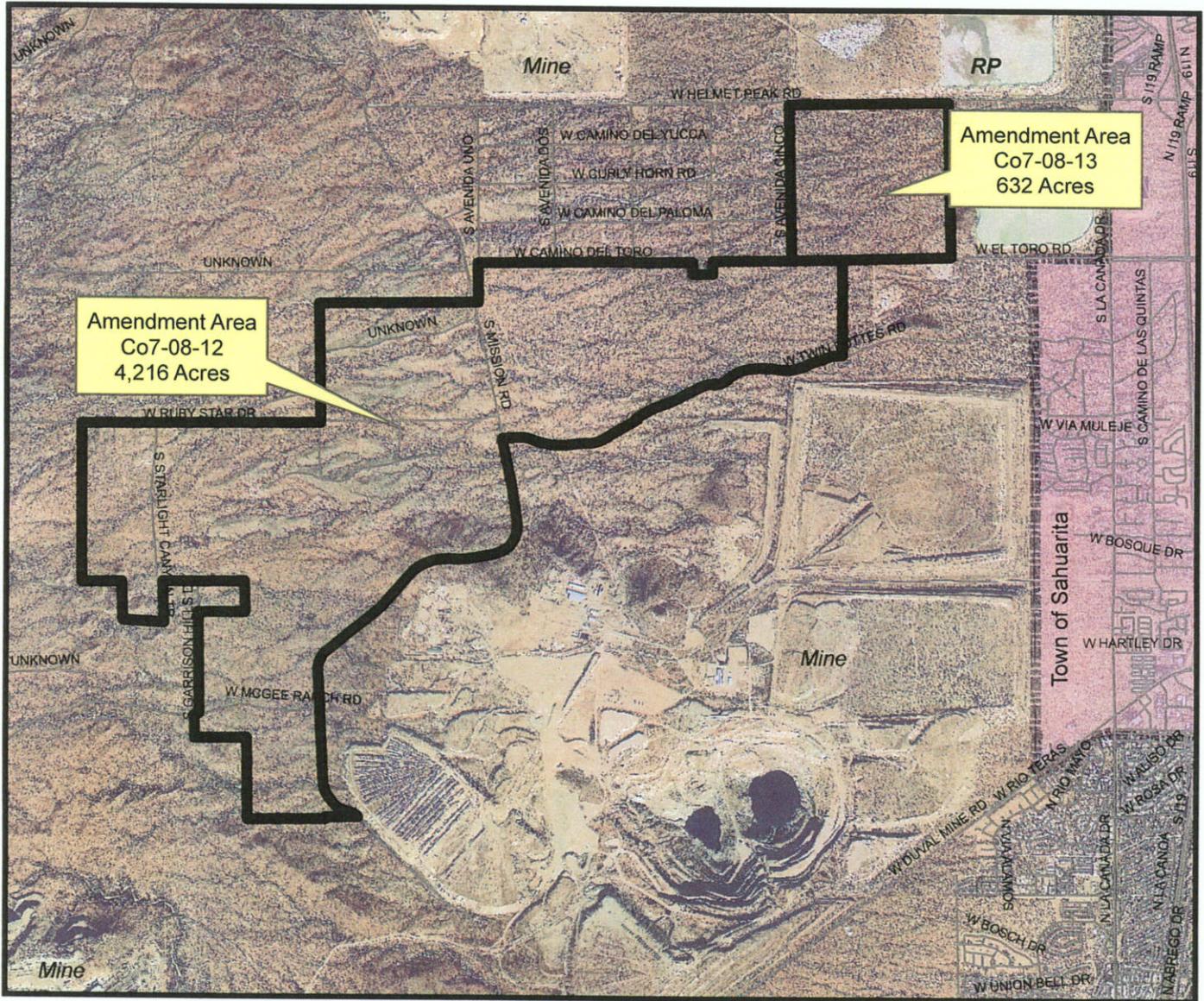
Based on this analysis, we recommend **the following as a Rezoning Policy** should the Board of Supervisors approve this plan amendment:

- Discussions continue to extend a CAP pipeline south through the Sahuarita Water Company service areas. The applicant should be encouraged to continue participation in the funding of a CAP pipeline to bring renewable and potable water to the area. Otherwise, this area will continue to be groundwater dependent with significant water-level declines.
- The applicant states that reclaimed water will be used for landscaping irrigation. They indicate a Wastewater Treatment Facility will be built for the site. A reclaimed water infrastructure currently does not extend to this area. Construction of the reclaimed system should be addressed now or in future land use planning actions.
- Low Intensity Development (LID) water harvesting should be incorporated into residential and commercial landscaping, paving, parking lots and park designs to encourage use of stormwater to irrigate exterior areas and conserve use of groundwater.

If you have any questions, please do not hesitate to contact me.

COMPREHENSIVE PLAN AMENDMENTS

Aerial Photo (2006)



| | | |
|---|---|---|
| Taxcodes: Multiple | CO7-08-12 MISSION PEAKS 4000, LLC AND RUBY STAR RANCH, LLC – S. MISSION ROAD/ MISSION PEAKS 1 2008 MAJOR PLAN AMENDMENT CO7-08-13 ARIZONA STATE LAND DEPARTMENT – W. HELMET PEAK ROAD MISSION PEAKS 2 2008 MAJOR PLAN AMENDMENT | Located south of Helmet Peak Road and east and west of S. Mission Road north of the intersection with W. Twin Buttes Road, and west of S. Mission Road south of the intersection with W. Twin Buttes Road |
| | Co7-08-12: Low Intensity Rural (LIR) and Resource Productive (RP) TO Medium Intensity Urban (MIU), Medium/High Intensity Urban (MHIU), Community Activity Center (CAC), Neighborhood Activity Center (NAC), and Resource Transition (RT) Co7-08-13: Resource Productive (RP) TO Medium Intensity Urban (MIU), Medium/High Intensity Urban (MHIU), and Neighborhood Activity Center (NAC) | |
|  | Sections 24, 25, 26, 27, 34, 35, and 36, Township 17 South, Range 12 East; Sections 19, 20, 21 and 30, Township 17 South, Range 13 East, and Sections 1 and 2, Township 18 South, Range 12 East, in the Upper Santa Cruz Subregion | |
| | P&Z Hearing Date: October 29, 2008 BOS Hearing Date: December 9, 2008 | Scale: 1:63,000 Date: September 2, 2008 |



MEMORANDUM

Water Resources

Regional Flood Control District



March 23, 2009

TO: Pima County Development Services **FROM:** Frank Postillion CGWP,
Chief Hydrologist

SUBJECT: Co9-08-20 Harrington Sterling Estates Rezoning

A Water Supply Impact Analysis has been conducted on proposed Rezoning Co9-08-20 Harrington Sterling Estates. Pima County conducts a Water Supply Impact Analysis on a Rezoning regarding how the proposal would affect five critical issues.

| PIMA COUNTY'S WATER SUPPLY IMPACT ANALYSIS | | |
|--|---|--|
| | CRITICAL ISSUE | RESPONSE |
| 1. | Water Service and Renewable Water Supply Options | The application mentions that Tucson Water (TW) will serve the site from a 16" main along Limberlost Road. The proposed rezoning area is within the Tucson Water service area. Presently, TW does have access to a renewable and potable water supply (CAP in the Avra Valley). In this area, TW may pump from local ground-water wells due to system limitations in boosting a blend of CAP and groundwater from the Avra Valley (Clearwater). However, a blend of Clearwater and local groundwater will be provided. |
| 2. | Current and Projected Depth to Groundwater and Groundwater Trend Data | The average depth to groundwater in this area is approximately 20-25 feet. Groundwater at this depth is likely to support vegetation or aquatic ecosystems. Groundwater levels have declined in the area between 1990 and 2005 as much as 0.6-0.8 foot/year. Groundwater levels are projected to remain the same next 25 years. |
| 3. | Proximity to Areas of Known or Potential Ground Subsidence | The proposed rezoning area is not in an area of high subsidence |
| 4. | Proximity to known Groundwater-Dependent Ecosystems | The proposed rezoning area is within a groundwater dependent ecosystem. Some of the provider wells (TW) are within a groundwater dependent ecosystem. |
| 5. | Location within a Hydrogeologic Basin, including Depth to Bedrock | The proposed rezoning is located in the Tanque Verde Sub-Basin area of the Tucson Hydrogeologic Basin area. This sub-basin has been identified as being sensitive to groundwater removal. Depth to bedrock in this area is estimated at between 400-800 feet feet. |

Pima County's Water Supply Impact Analysis finds that, under existing conditions, the Plan Amendment property does have access to renewable and potable water with Tucson Water in this area. Tucson Water may in the future provide more water that is from a renewable source when infrastructure can boost the Avra Valley groundwater-CAP blend (Clearwater) to the area. For now, groundwater and the Clearwater blend will be provided for the area.

The proposed rezoning area is within a groundwater dependent ecosystem. The area is also where groundwater has been declining but is projected to recover as Tucson Water reduces pumping from area wells and provides more Clearwater blend.

Based on this analysis, we recommend **the following as a Rezoning condition** should the Board of Supervisors approve this plan amendment:

- The applicant will prepare a water conservation plan with the tentative plat. The plan shall indicate the maximum allowed turf area for each individual lot. The maximum turf area shall be included in the subdivision's recorded CC&R's.

If you have any questions or comments please feel free to contact me.