

Appendix B

**Environmental Checklist Form for the
2025 Great Park Neighborhoods Zone Change,
Implementing Approvals
and Property Exchange**

Appendix B

Environmental Checklist

Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Resulting in New Significant Impacts	New Information Resulting in More Severe Impacts	New Information Identifying New Mitigation Measures Available to Reduce Significant Impacts	Less-Than-Significant Impact/No Substantial Change from Previous Analysis
I. AESTHETICS. Except as provided in Public Resources Code Section 21099, would the project:						
a) Have a substantial adverse effect on a scenic vista?						•
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?						•
c) In nonurbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?						•
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?						•
<p>The Certified EIR concluded that visual character impacts would remain less than significant with compliance with the City's General Plan and Zoning Ordinance and that light and glare impacts would be reduced to less than significant with incorporation of mitigation measures A-1 through A-2 and PPP 1-1. There are no scenic vistas or resources on or within the vicinity of the project site. Although the Proposed Project would result in the conversion of non-residential uses to residential uses, development will occur in the same Districts planned for development in the Certified EIR. With regards to the Property Exchange, no change in the allowable uses or intensity of development within Districts would occur beyond that analyzed for purposes of the Zone Change and Implementing Approvals as discussed herein. The bulk and massing of the proposed structures would be similar to those considered in the Certified EIR. The development of residential and non-residential land uses would be required to adhere to the land use regulations and standards outlined in Chapter 3-37 (Zoning District Land Use Regulations and Development Standards) of the Irvine Zoning Ordinance. This chapter of the Zoning Ordinance outlines the regulations and development standards that are applicable to land uses proposed throughout the various planning areas of the City, including setbacks, building heights, and landscaping. Landscaping of both residential and non-residential land uses would also be required to adhere to the landscaping and maintenance requirements outlined in Chapter 3-15 (Landscaping) of the Irvine Zoning Ordinance. Therefore, no additional impacts related to aesthetics would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p> <p>The Certified EIR identified Mitigation Measures A-1 and A-2, which, if implemented, would reduce the effects of the project to a less than significant level. The following mitigation measures identified in the Certified EIR remain applicable and shall be implemented as part of the Proposed Project.</p> <p>A-1 Prior to issuance of building permits, lighting plans and signage plans for residential or nonresidential new development shall be reviewed by the Community Development Department to ensure that minimal light intrusion and spillover into adjacent residential areas occurs.</p> <p>A-2 Prior to the issuance of building permits for residential and nonresidential development, and during the master plan review process for future development in the Project area, the Director of Community Development shall ensure that mirrored and highly reflective surfaces are discouraged or, where proposed, shall be accompanied by a design-level glare impact analysis that demonstrates no adverse visual impairment to motorists or other visual nuisance occurs.</p>						

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<p>Additionally, the Certified EIR identified an existing plan, program, policy ("PPP") that will help reduce or avoid potential aesthetics impacts. The following PPP is applicable and shall be implemented as part of the Proposed Project.</p> <p>PPP 1-1 Prior to issuance of building permits, the applicant shall demonstrate it has met the Irvine Uniform Security Code requirements for lighting by providing the below listed items for a complete review by the Police Department. Failure to provide a complete lighting package will result in the delay of satisfaction of this condition (City Standard Condition 3.6).</p> <ol style="list-style-type: none"> Electrical plan showing light fixture locations, type of light fixture, height of light fixture, and point-by-point photometric lighting analysis overlaid on the landscape plan with a tree legend. The photometric plan should only show those fixtures used to meet the Irvine Uniform Security Code requirements. Corresponding fixture cut-sheets (specifications) of those lights used to meet the Irvine Uniform Security Code. Site plan demonstrating that landscaping shall not be planted so as to obscure required light levels. Site plans that are full-scale and legible. <p>The Certified EIR did not identify any project design features ("PDFs") that would help reduce or avoid potential aesthetics impacts.</p>						
<p>II. AGRICULTURE AND FORESTRY RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:</p>						
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?						•
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?						•
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g))?						•
d) Result in the loss of forest land or conversion of forest land to non-forest use?						•
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?						•

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<p>The Certified EIR identified approximately 13 acres of designated Prime Farmland (which is the best combination of physical and chemical features able to sustain long-term production of agricultural crops) that would be converted to preservation uses and placed within the future Wildlife Corridor. No agricultural land within the project area was covered by Williamson Act contracts. Mitigation Measures AG1 through AG3 and PPP2-1 were identified in the Certified EIR to reduce potentially significant impacts related to agricultural resources to a less-than-significant level. Although the Proposed Project would result in slightly higher residential uses, development will occur in the same Districts planned for development in the Certified EIR. With regards to the Property Exchange, no change in the allowable uses or intensity of development within Districts would occur beyond that analyzed for purposes of the Zone Change and Implementing Approvals as discussed herein. The project site is already developed and only contains ornamental landscaping. Therefore, no additional impacts related to agriculture and forestry resources would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p> <p>The Certified EIR identified Mitigation Measures AG1 through AG3, which, if implemented, would reduce the effects of the project to a less than significant level. The following mitigation measures identified in the Certified EIR remain applicable and shall be implemented as part of the Proposed Project.</p>							
AG1	<p>In order to encourage agriculture as an interim land use pending development on the project site by warning future residents that they are buying or renting a house adjacent to existing agricultural operations, disclosure statements shall include the following for subdivisions proposed adjacent to existing agricultural operations:</p> <ul style="list-style-type: none"> • Prior to issuance of building permits, the applicant shall submit, and the Director of Community Development shall have approved, a completed occupancy disclosure form for the project. The approved disclosure form, along with its attachments, shall be included as part of the rental/lease agreement and as part of the sales literature for the project. The disclosure statement shall include the following information: <ul style="list-style-type: none"> ◦ Continuation of agricultural operations adjacent to the site and their potential effects (spraying of pesticides, noise, dust, odor, etc.) on future residents or tenants. 						
AG2	Heritage and community service/educational farming operations shall be encouraged within utility easements and other lands. Heritage farming is defined as small-scale specialty farming operations that can be accommodated in an urban environment. An example would be the Edible Landscape project located adjacent to Harvard Avenue within the Edison right-of-way.						
AG3	Future landowners and the City shall work cooperatively with farmers to minimize conflicts between agricultural operation and adjacent urban uses.						
<p>Additionally, the Certified EIR identified a PPP that will help reduce or avoid potential agricultural impacts. The following PPP is applicable and shall be implemented as part of the Proposed Project.</p> <p>PPP 2-1 The City shall continue to implement the Agricultural Legacy Program outlined in City of Irvine General Plan Open Space and Conservation Element. Objective L-10 is intended to mitigate the conversion of agricultural land to nonagricultural uses citywide by facilitating limited-scale agricultural operations and programs on public lands within Irvine. As part of the Agricultural Legacy Program, specific sites in Irvine will be identified and made available for metro-farming within five years. Metro-farming generally includes small-scale agricultural operations and activities that can be accommodated in an urban environment. Such activities could include, but not be limited to, small-scale specialty farming, model farming, heritage farming, and community service/educational farming.</p> <p>The Certified EIR did not identify any PDFs that would help reduce or avoid potential agricultural and forestry impacts.</p>							
III. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations. Would the project:							
a)	Conflict with or obstruct implementation of the applicable air quality plan?						•
b)	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?						•
c)	Expose sensitive receptors to substantial pollutant concentrations?						•

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d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?						•
This resource is evaluated in more detail in Chapter 3 of this addendum.						
IV. BIOLOGICAL RESOURCES. Would the project:						
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?						•
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?						•
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?						•
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?						•
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?						•
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?						•

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<p>The Certified EIR identified nine vegetative communities, several sensitive plant species, and a large number of mature trees. The Certified EIR also identified the potential for supporting wintering burrowing owls and disturbance to riparian habitats. Mitigation Measures BIO-1 through BIO-4, PPP13-1 and PPP13-2 were identified in the Certified EIR to reduce potentially significant impacts related to biological resources to a less-than-significant level. Although the Proposed Project would result in slightly higher number of residential uses, development will occur in the same Districts planned for development in the Certified EIR. With regards to the Property Exchange, no change in the allowable uses or intensity of development within Districts would occur beyond that analyzed for purposes of the Zone Change and Implementing Approvals as discussed herein. The project site is already heavily disturbed, developed with a combination of intensive agricultural uses, has been previously graded, and does not provide habitat for sensitive species as confirmed by the Biological Resource Assessment prepared prior to the first time the Project site was subdivided in satisfaction of the Mitigation Measures and PPPs identified below and recently confirmed by regular and recent site visits by the Project's biologist. All planned development areas have been developed or rough grading has been completed. No native vegetation within planned development areas remains. There is no substantial evidence indicating that there have been any changes of circumstance or new information regarding biological conditions that could justify new environmental review under the applicable standards of CEQA Guidelines Section 15162. Therefore, no additional impacts related to biological resources would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p> <p>The Certified EIR identified Mitigation Measures BIO-1 through BIO-4, which, if implemented, would reduce the effects of the project to a less than significant level. The following mitigation measures in the Certified EIR remain applicable and shall be implemented as part of the Proposed Project..</p> <p>BIO-1 Prior to approval of a subdivision map for each project area, a focused survey for the southern tarplant, mountain plover, and burrowing owl shall be conducted. Prior to approval of a subdivision map for development within, or in proximity to Serrano Creek, a focused survey shall be conducted for the least Bell's vireo and southwestern willow flycatcher. Should the focused survey identify a significant population of southern tarplant or mountain plover, or the presence of burrowing owls, least Bell's vireo, or southwestern willow flycatcher in an area proposed for development, impacts shall be avoided through incorporation of the species into an open space easement or if impacts cannot be avoided, then mitigation shall be negotiated through consultation with the United States Fish and Wildlife Service (USFWS) and the California Department of Fish and Wildlife (CDFW).</p> <p>BIO-2 Prior to approval of a subdivision map for each project area, a wetland delineation shall be performed for all areas within the master plan sub-area that contain the potential for wetland habitat and/or jurisdictional waters. The loss of impacted wetlands shall be mitigated through the implementation of a wetland mitigation plan prepared and accepted by the appropriate agency (i.e., U.S. Army Corps of Engineers, U.S. Fish and Wildlife Service, California Department of Fish and Wildlife). Wetlands impacted on-site shall be mitigated through on-site or off-site replacement, re-creation (i.e. within the proposed wildlife corridor), and/or revegetation as deemed acceptable by the appropriate jurisdictional agencies.</p> <p>BIO-3 The City shall continue to work with State and federal agencies during the implementation of the proposed Project to implement the revegetation/restoration plan for the future Wildlife Corridor. Measures (e.g., sight and sound barriers, including artificial sound walls and natural diversions [e.g., hedges and tree lines]) shall be incorporated into corridor design to ensure the viability of the corridor. The City shall implement the corridor consistent with the design criteria and viability analysis established in the Final FEIR.</p>						

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<p>BIO-4 Prior to issuance of a grading permit for the Project, a complete inventory of all trees of trunk diameter at breast height (DBH) greater than six inches and any significant (as determined by a certified arborist selected by the City) plants on the project site, excluding those within the habitat preserve shall be prepared. This inventory shall be prepared by an arborist certified by the International Society of Arboriculture and shall include (but not be limited to) data for each tree such as species, variety, DBH, condition (excellent, good, fair, poor, dead), and any recommendations. All trees in this inventory shall be considered Significant Trees under the City of Irvine's Urban Forestry Ordinance (UFO) (Sections 5-7-401 et al.), and the UFO shall apply to all trees included in this inventory.</p> <p>Additionally, the Certified EIR identified PPPs that apply to the Proposed Project and would help reduce or avoid potential biological resources impacts. The following PPPs identified in the Certified EIR remain applicable and shall be implemented as part of the Proposed Project.</p> <p>PPP 13-1 All construction activities shall comply with the federal Migratory Bird Treaty Act of 1918 (MBTA). The MBTA governs the taking and killing of migratory birds, their eggs, parts, and nests and prohibits the take of any migratory bird, their eggs, parts, and nests. Compliance with the MBTA shall be accomplished by the following:</p> <ul style="list-style-type: none"> • If vegetation is to be cleared during the nesting season (March 1 to September 1), all suitable habitat shall be thoroughly surveyed for the presence of nesting birds by a qualified Biologist no more than 72 hours prior to clearing. The survey results shall be submitted by the Property Owner/Developer to the Director of Community Development. • If any active nests are detected, the area shall be flagged and mapped on the construction plans along with a buffer distance to be determined by the qualified Biologist. The buffer area shall be avoided until the nesting cycle is complete or until the Biologist has determined that the nest has failed. In addition, the Biologist shall be present on the site to monitor the vegetation removal to ensure that any nests that were not detected during the initial survey are not disturbed. <p>PPP 13-2 All construction activities shall comply with Sections 3503, 3503.5 and 3513 of the California Fish and Game Code, which protect active nests of any raptor species, including common raptor species. Compliance with these codes shall be accomplished by the following:</p> <ul style="list-style-type: none"> • If vegetation is to be cleared during the raptor nesting season (February 1 to June 30), all suitable habitat within 300 feet of the Project site shall be thoroughly surveyed for the presence of nesting raptors (including burrowing owl) by a qualified Biologist 72 hours prior to clearing. The survey results shall be submitted by the Property Owner/Developer to the Director of Community Development and the California Department of Fish and Wildlife. • If any active nests are detected, the area shall be flagged and mapped on the construction plans along with a minimum 300-foot buffer, with the final buffer distance to be determined by the qualified Biologist. The buffer area shall be avoided until the nesting cycle is complete or until it is determined that the nest has failed. In addition, the Biologist will be present on the site to monitor the vegetation removal. 						
V. CULTURAL RESOURCES. Would the project:						
a) Cause a substantial adverse change in the significance of a historical resource pursuant to § 15064.5?						•
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?						•
c) Disturb any human remains, including those interred outside of dedicated cemeteries?						•
<p>The Certified EIR identified ten prehistoric archaeological sites and eight isolated prehistoric artifacts that have been recorded in the northeastern habitat preserve portions of PA 51. The Certified EIR also concluded that the build out of the Proposed Project would not cause a substantial adverse change in the significance of any historical resource due to the lack of historic resources. However, there is a potential for unknown archaeological resources and unknown human remains to be present that could be disturbed during grading activities associated with future development of this area. Mitigation Measures CULT-1 through CULT-4 were identified in the Certified EIR to reduce potentially significant impacts related to archaeological resources and human remains to a less-than-significant level. Although the Proposed Project would result in slightly higher residential uses, development will occur in the same Districts planned for development in the Certified EIR. With regards to the Property Exchange, no change in the allowable uses or intensity of development within Districts would occur beyond that analyzed for purposes of the Zone Change and Implementing Approvals as discussed herein. Therefore, no additional impacts related to cultural resources would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p>						

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<p>The Certified EIR identified Mitigation Measures CULT-1 through CULT-4 which, if fulfilled, would reduce cultural resources impacts related to development under the Certified EIR to a less than significant level. The following mitigation identified in the Certified EIR remain applicable and shall be implemented as part of the Proposed Project.</p> <p>CULT-1 Prior to subdivision for development, a detailed archaeological report(s) shall be prepared within PA 51. This report(s) shall specifically address the potential for encountering archaeological resources at the time specific development is proposed. The report(s) shall provide recommendations to prevent degradation of archaeological resources such as site avoidance and data recovery. Recommendations contained in the report shall be implemented. Compliance with this measure shall be verified by the Community Development Department.</p> <p>CULT-2 Monitoring of excavation and grading activities associated with future development in PA 51 shall be conducted by a certified archaeologist in accordance with the report required in Mitigation Measure CULT-1. If resources are encountered in the course of ground disturbance, the archaeological monitor shall be empowered to halt grading and to initiate an archaeological testing program. The testing shall include recordation of artifacts, controlled removal of the materials, and an assessment of their importance under CEQA and the City's local guidelines. Compliance with this measure shall be verified by the Community Development Department.</p> <p>CULT-3 Prior to the issuance of grading permits and/or building permits for any future development in PA 51, a detailed mitigation program shall be submitted by the applicant to the City to address archaeological resources discovered during grading. Provisions of the program shall include an immediate evaluation of the find by a qualified archaeologist. If the find is determined to be a unique archaeological resource, contingency funding and a time allotment sufficient to allow for implementation of avoidance measures or appropriate mitigation shall be available. Work may continue on other parts of the construction site while archaeological resource mitigation takes place. The City has standard conditions applied prior to the issuance of grading permits when a project includes potentially significant archaeological sites. These include retaining a qualified archaeologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process. Compliance with this measure shall be verified by the Community Development Department.</p> <p>CULT-4 Prior to the issuance of any grading and/or building permits, a mitigation program shall be submitted by the developer to the City to address the accidental discovery or recognition of any human remains. The program shall include the following: There shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <ul style="list-style-type: none"> • The county coroner must be contacted to determine that no investigation of the cause of death is required, and <p>If the coroner determines the remains to be Native American:</p> <ul style="list-style-type: none"> • The coroner shall contact the Native American Heritage Commission within 24 hours. • The Native American Heritage Commission shall identify the person or persons it believes to be the most likely descended from the deceased Native American. • The most likely descendent may make recommendations to the landowner or the person responsible for the excavation work, for the means of treating or disposing of, with appropriated dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98, or • Where the following conditions occur, the landowner or his authorized representative shall rebury the Native American human remains and associated grave goods with appropriate dignity on the property in a location not subject to further subsurface disturbance. <ul style="list-style-type: none"> ○ The Native American Heritage Commission is unable to identify a most likely descendent or the most likely descendent failed to make a recommendation within 24 hours after being notified by the commission; ○ The descendant identified fails to make a recommendation; or • The landowner or his authorized representative rejects the recommendation of the descendant, and the mediation by the Native American Heritage Commission fails to provide measures acceptable to the landowner. <p>Compliance with this measure shall be verified by the Community Development Department.</p> <p>No PPPs or PDFs were identified in the Certified EIR to further reduce potential impacts on cultural resources.</p>						

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VI. ENERGY. Would the project:						
a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?						•
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?						•

Energy was not evaluated as a standalone topic in the Certified EIR; however, information about energy use was known as the time the Certified EIR was certified, the issue was included as an inherent component of the air quality and greenhouse gas analysis, and energy conservation strategies were incorporated through mitigation measures in the Air Quality and Greenhouse Gas Emissions sections of the Certified EIR. These measures include requirements for energy-efficient equipment, reduced idling times, and other construction-related practices that reduce fuel consumption. Although the Proposed Project would involve the use of energy use during both construction and operation, this increase would not be wasteful, inefficient, or unnecessary. Mitigation Measures AQ-2 and AQ-3, along with PPPs 4-3 through 4-7, PPP 13-6, and PDFs 4-1, 4-2, 4-7, and 4-8, remain applicable to the Proposed Project and would be implemented to ensure energy efficiency and conservation are achieved. The Proposed Project would not conflict with any adopted state or local plans related to renewable energy or energy efficiency. With implementation of applicable mitigation, existing regulatory compliance, and standard construction practices, the conversion of non-residential uses to up to 1,300 residential condominium units would not result in significant energy impacts..

The Certified EIR evaluated a higher total building square footage and vehicle trip generation under the previously approved non-residential uses. The Proposed Project, while shifting to residential use, would result in fewer daily vehicle trips and overall reduced energy demand when compared to the non-residential development scenario. Therefore, the Proposed Project remains within the scope of analysis in the Certified EIR.

Mitigation Measures AQ-1 and AQ-2 from the Certified EIR remain applicable, will be implemented as part of the Proposed Project, and are listed below.

Construction Phase

AQ-2 Prior to the commencement of construction activities required to demolish and/or remove existing DON structures, including runways, the Director of Community Development shall receive and approve a construction emissions mitigation plan from the chosen demolition contractor. Prior to the issuance of grading permits, the applicant of any future development project shall submit, and the Director of Community Development shall approve a construction emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.

- Utilize off-road construction equipment that conforms to Tier 3 of the United States Environmental Protection Agency, or higher emissions standards for construction equipment over 50 horsepower that are commercially available. The construction contractor shall be made aware of this requirement prior to the start of construction activities. Use of commercially available Tier 3 or higher off-road equipment, which is:
 - Year 2006 or newer construction equipment for engines rated equal to 175 horsepower (hp) and greater;
 - Year 2007 and newer construction equipment for engines rated equal to 100 hp but less than 175 hp; and
 - Year 2008 and newer construction equipment for engines rated equal to or greater than 50 hp but less than 100 hp.
- The requirement to use such equipment shall be stated on all grading plans. The construction contractor shall maintain a list of all operating equipment in use on the Project Site. The construction equipment list shall state the makes, models, and numbers of construction equipment on-site.
- Water exposed soils at least three times daily and maintain equipment and vehicle engines in good condition and in proper tune.
- Wash off trucks leaving the site.
- Replace ground cover on construction sites when it is determined that the site will be undisturbed for lengthy periods.
- Reduce speeds on unpaved roads to less than 15 miles per hour.
- Halt all grading and excavation operations when wind speeds exceed 25 miles per hour.
- Suspend all emission generating activities during smog alerts.
- Use propane- or butane-powered on-site mobile equipment instead of diesel/gasoline, whenever feasible.
- Properly maintain diesel-powered on-site mobile equipment.
- Prohibit nonessential idling of construction equipment to five minutes or less in compliance with California Air Resources Board's Rule 2449.
- Sweep streets with SCAQMD Rule 1186 compliant PM10-efficient vacuum units at the end of the day if substantial visible soil material is carried over to the adjacent streets.
- Use electricity from power poles rather than temporary on-site diesel- or gasoline-powered generators, whenever feasible.
- Use of low-VOC asphalt.
- Maintain a minimum 24-inch freeboard on trucks hauling dirt, sand, soil, or other loose materials and tarp materials with a fabric cover or other suitable means.
- Provide temporary traffic controls (e.g., flag persons) during all phases of construction to ensure minimum disruption of traffic.
- Schedule construction activities that affect traffic flow on adjoining streets to off-peak hours to the extent possible.
- Reroute construction trucks away from congested streets, whenever feasible.
- Provide dedicated turn lanes for movement of construction trucks and equipment on- and off-site, whenever feasible.

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<ul style="list-style-type: none"> Use coatings and solvents with a volatile organic compound (VOC) content lower than required under SCAQMD Rule 1113 (i.e., Super Compliant Paints). All architectural coatings shall be applied either by (1) using a high-volume, low-pressure spray method operated at an air pressure between 0.1 and 10 pounds per square inch gauge to achieve a 65 percent application efficiency; or (2) manual application using a paintbrush, hand-roller, trowel, spatula, dauber, rag, or sponge, to achieve a 100 percent application efficiency. The construction contractor shall also use pre-coated/natural colored building, where feasible. Use of low-VOC paints and spray method shall be included as a note on architectural building plans. 						
<p>Operational Phase</p> <p>AQ-3 Prior to the issuance of building permits for any future development, the applicant shall submit, and Director of Community Development shall have approved, an operation-emissions mitigation plan. The plan shall identify implementation procedures for each of the following emissions reduction measures and all feasible mitigation measures shall be implemented. If certain measures are determined infeasible, an explanation thereof shall be provided.</p> <ul style="list-style-type: none"> Utilize built-in energy-efficient appliances to reduce energy consumption and emissions. Utilize energy-efficient and automated controls for air conditioners and lighting to reduce electricity consumption and associated emissions. Install special sunlight-filtering window coatings or double-paned windows to reduce thermal loss, whenever feasible. Utilize light-colored roofing materials as opposed to dark roofing materials to conserve electrical energy for air-conditioning. Provide shade trees in residential subdivisions as well as public areas, including parks, to reduce building heating and cooling needs, whenever feasible. Ensure that whenever feasible, commercial truck traffic is diverted from local roadways to off-peak periods. Centralize space heating and cooling for multiple-family dwelling units and commercial space. Orient buildings north/south for reducing energy-related combustion emissions. Use solar energy, when feasible. Use high rating insulation in walls and ceilings. <p>The following PPPs and PDFs identified in the Certified EIR remain applicable to the Proposed Project and will be implemented to reduce or avoid potential energy impacts.</p> <p>Statewide and Federal Operational Strategies</p> <p>PPP 4-3 Building and Energy Efficiency Standards (CCR Title 24): Prior to the issuance of a building permit for residential, commercial, or office structures in the Proposed Project Site, development plans for these structures shall be required to demonstrate that the project meets the 2008 Building and Energy Efficiency Standards. Commonly known as Title 24, these standards are updated periodically to allow consideration and possible incorporation of new energy efficiency technologies and methods. The 2008 standards are approximately 15 percent more energy efficient than the 2005 Building and Energy Efficiency Standards. Plans submitted for building permits shall include written notes demonstrating compliance with the 2008 energy standards and shall be reviewed and approved by the Public Utilities Department prior to issuance of building permits. Design strategies to meet this standard may include maximizing solar orientation for daylighting and passive heating/cooling, installing appropriate shading devices and landscaping, utilizing natural ventilation, and installing cool roofs. Other techniques include installing insulation (high R value) and radiant heat barriers, low-e window glazing, or double-paned windows.</p>						

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<p>PPP 4-4 Title 24 Code Cycles: Net-Zero Buildings (Residential & Non-Residential): The California Public Utilities Commission adopted its Long-Term Energy Efficiency Strategic Plan on September 18, 2008, presenting a roadmap for all new residential and commercial construction to achieve a zero-net energy standard. This Plan outlines the goal of reaching zero net energy in residential construction by 2020 and in commercial construction by 2030. Achieving this goal will require increased stringency in each code cycle of California's Energy Code (Title 24).</p> <p>PPP 4-5 California Renewable Portfolio Standard: CARB's Renewable Portfolio Standard (RPS) is a foundational element of the State's emissions reduction plan. In 2002, Senate Bill 1078 established the California RPS program, requiring 20 percent renewable energy by 2017. In 2006, Senate Bill 107 advanced the 20 percent deadline to 2010, a goal which was expanded to 33 percent by 2020 in the 2005 Energy Action Plan II. On September 15, 2009, Governor Arnold Schwarzenegger signed Executive Order S-21-09 directing CARB to adopt regulations increasing RPS to 33 percent by 2020. These mandates apply directly to investor-owned utilities, which in the case of the 2012 Modified Project is Southern California Edison ("SCE").</p> <p>PPP 4-7 Federal Corporate Average Fuel Economy ("CAFE") Standards: The 2007 Energy Bill creates new federal requirements for increases in fleetwide fuel economy for passenger vehicles and light trucks. The federal legislation requires a fleetwide average of 35 miles per gallon (mpg) to be achieved by 2020. The National Highway Traffic Safety Administration is directed to phase in requirements to achieve this goal. Analysis by CARB suggests that this will require an annual improvement of approximately 3.4 percent between 2008 and 2020.</p> <p>PPP 13-6 The Irvine Sustainable Community Initiative (Initiative Ordinance 10-11), adopted by the voters of the City as Initiative Measure S on November 2, 2010, and certified by the City Council on December 14, 2010, became effective December 24, 2010. The ordinance was adopted to ratify and implement policies in support of renewable energy and environmental programs for a sustainable community. It outlines the City's direction for continuing to develop and implement programs geared towards green building, renewable energy and sustainability. For example, the City would continue to develop and implement recycling, zero waste or other innovative onsite business programs to divert waste from landfills and also continue to develop and implement the use of native, California-friendly and drought-tolerant landscaping.</p> <p>PDF 4-1 Compact/Mixed-Use Development: The California Energy Commission (CEC) considers compact development forms beneficial for minimizing energy consumption that leads to greenhouse gas emissions. In fact, the CEC's report on the connections between land use and climate change identifies density as the project feature most predictive of the number of vehicle trips and vehicle miles traveled ("VMT") by project occupants. Like the 2011 Approved Project, the 2012 Modified Project increases the density of development on the Proposed Project Site. Doing so will tend to reduce VMT on a local and regional basis. For the purpose of this analysis, it was assumed that there would be only a 25% reduction in VMT, which is within the range observed in Southern California.</p> <p>PDF 4-2 High Rate of Internal Trip Capture: With the inclusion of a mix of land uses including office, commercial, industrial, and residential in the Proposed Project Site, the 2012 Modified Project significantly reduces trips outside the Proposed Project Site. This reduces trip length and congestion on the local circulation system outside the Proposed Project Site.</p> <p>PDF 4-7 Energy Star Appliances: EnergyStar appliances (excluding refrigerators), such as dishwashers, clothes washers, clothes dryers, air conditions, furnaces, and water heaters, shall be offered or installed in all residential dwelling units.</p> <p>PDF 4-8 Building Energy Efficiency: Residential dwellings and non-residential buildings will be constructed so that they achieve 15 percent higher energy efficiency than the applicable standards set forth in the 2008 California Building and Energy Efficiency Standards (Title 24, Part 6 of the California Building Code) or meet the standards in effect at the time of issuance of building permit. The Energy Commission's 2013 Building Energy Efficiency Standards are 25 percent more efficient than the 2008 standards for residential construction and 30 percent more efficient for nonresidential construction. The 2013 Energy Efficiency Standards, which take effect on January 1, 2014, offer builders more efficient windows, insulation, lighting, ventilation systems and other options that would reduce energy consumption in homes and businesses.</p>						

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VII. GEOLOGY AND SOILS. Would the project:						
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:						•
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map, issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.						•
ii) Strong seismic ground shaking?						•
iii) Seismic-related ground failure, including liquefaction?						•
iv) Landslides?						•
b) Result in substantial soil erosion or the loss of topsoil?						•
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?						•
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?						•
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?						•
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?						•
<p>The Certified EIR identified Mitigation Measures GS-1 through GS-4 which, if fulfilled, would reduce geology and soils impacts related to development under the Certified EIR to a less than significant level. The Certified EIR found that hazards arising from strong ground shaking would be less than significant after implementation of Mitigation Measures GS-1 through GS-3 adopted in the MMRP for the Approved (Baseline) Project, which are incorporated into the Proposed Project. Although the Proposed Project would result in slightly higher residential uses, development will occur in the same Districts planned for development in the Certified EIR and would be required to comply with California Building Code seismic safety provisions and the City of Irvine Grading Code. With regards to the Property Exchange, no change in the allowable uses or intensity of development within Districts would occur beyond that analyzed for purposes of the Zone Change and Implementing Approvals as discussed herein. Therefore, no additional impacts related to geology and soils would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p> <p>The Certified EIR concluded that impacts to paleontological resources would be less than significant with implementation of Mitigation Measure P1 because any uncovered fossils would be preserved in an institution that would benefit scientific knowledge of paleontological resources and formations. Although earthmoving operations, such as grading and trenching, have the potential to impact buried paleontological resources and the Proposed Project would result in slightly higher non-residential uses, development will occur in the same Districts planned for development in the Certified EIR. Therefore, no additional impacts related to paleontological resources would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p>						

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<p>The Certified EIR identified Mitigation Measures GS-1 through GS-4 which, if fulfilled, would reduce geology and soils impacts related to development under the Certified EIR to a less than significant level. The following mitigation identified in the Certified EIR remain applicable and shall be implemented as part of the Proposed Project.</p> <p>GS-1 Prior to issuance of a building permit, the City of Irvine shall require that all development be designed in accordance with the seismic design provisions outlined in future proposed development geotechnical reports and specified in the latest Building Codes adopted by the City of Irvine. Compliance with this measure shall be verified by the Community Development Department.</p> <p>GS-2 Prior to issuance of a building permit, as per existing City policies, geotechnical studies shall be prepared at the time specific development projects are proposed to address site specific geotechnical considerations. The scope of each geotechnical study is based on the underlying geotechnical conditions of the individual site. These reports will provide measures to prevent settlement.</p> <p>1. Prior to design and construction of any future developments within the project area, a comprehensive geotechnical evaluation, including development-specific subsurface exploration and laboratory testing, shall be conducted. The purpose of the subsurface evaluation is to:</p> <ul style="list-style-type: none"> • Further evaluate the subsurface conditions in the area of the proposed structures. • Provide specific data on potential geologic and geotechnical hazards. • Provide information pertaining to the engineering characteristics of earth materials in the project area. <p>From this data, recommendations for grading/earthwork, surface, and subsurface drainage, temporary and/or permanent dewatering, foundations, pavement structural sections, and other pertinent geotechnical design considerations may be formulated and shall be included in the grading and building plans for individual developments. General recommendations are as follows:</p> <ul style="list-style-type: none"> • Seismic Ground Shaking - Measures to prevent risk of loss, injury or death involving seismic ground shaking include constructing new development to the latest adopted building codes. In addition, new development should not be located near active earthquake faults. • Erosion or Loss of Topsoil – Erosion and sediment control measures shall be implemented as required by the City's Grading and Water Quality ordinances. • Where Expansive Soils Exist – Measures for the design of foundations, slabs, flatwork and other improvements subject to drainage from expansive soils. <p>Compliance with this measure shall be verified Community Development Department.</p> <p>GS-3 Prior to issuance of building permits for the occupancy of any existing structure at the former MCAS El Toro, or occupancy of any existing structure if a building permit is not issued, a seismic evaluation of the structure including recommendations for seismic improvements required for compliance with current Building Codes for use of existing structures adopted by the City of Irvine and plans for any required seismic improvements shall be submitted to the Chief Building Official for review and approval.</p> <p>GS-4 Prior to issuance of a grading permit, detailed geotechnical and hydrology reports shall be prepared prior to any development approval or grading activities. These reports shall specifically address erosion control and surface runoff for both construction and long- term operations on the site. Recommendations contained in these reports to prevent soil erosion, siltation, and debris influx into the drainage system shall be implemented. Compliance with this measure shall be verified by the Community Development Department.</p> <p>The Certified EIR did not identify any PPPs or PDFs that would help reduce or avoid potential geology and soils impacts.</p>						

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<p>The Certified EIR included Mitigation Measure P1, which would reduce the effects of the Proposed Project on paleontological resources to a less than significant level. This measure is applicable to the Proposed Project.</p> <p>P1 Prior to issuance of a grading permit for any portion of the Project area, a qualified paleontologist shall be retained by the City or designee to carry out an appropriate paleontology investigation of the area proposed for grading. (A qualified paleontologist is defined as an individual with an M.S. or Ph.D. in paleontology or geology who is familiar with paleontological procedures and techniques.) The City of Irvine has standard conditions applied prior to the issuance of grading permits when a site includes potentially significant paleontological sites, and paleontological monitoring conditions have not been attached to the previous map approval. These standard conditions include retaining a qualified paleontologist, establishing procedures for cultural and scientific resource surveillance, and protection of any resources discovered during the grading process.</p> <p>When fossils are discovered, the paleontologist (or paleontological monitor) shall recover them. In most cases, this fossil salvage can be completed in a short period of time. However, some fossil specimens (such as a complete large mammal skeleton) may require an extended salvage period. In these instances, the paleontologist (or paleontological monitor) shall be allowed to temporarily direct, divert or halt grading to allow recovery of fossil remains in a timely manner. Because of the potential for the recovery of small fossil remains, such as isolated mammal teeth, it may be necessary in certain instances to set up a screening-washing operation on-site.</p> <p>Fossil remains collected during the monitoring and salvage portion of the mitigation program shall be cleaned, repaired, sorted, and cataloged. Compliance with this measure shall be verified by the Community Development Department.</p> <p>No PPPs or PDFs were identified in the Certified EIR to further reduce potential impacts on paleontological resources.</p>						
VIII. GREENHOUSE GAS EMISSIONS. Would the project:						
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?						•
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?						•
This resource is evaluated in more detail in Chapter 3 of this addendum.						
IX. HAZARDS AND HAZARDOUS MATERIALS. Would the project:						
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?						•
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?						•
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?						•
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code § 65962.5 and, as a result, would it create a significant hazard to the public or the environment?						•
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?						•

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f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?						•
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?						•
<p>The Certified EIR identified Mitigation Measures HH-1 through HH-6 which, if fulfilled, would reduce hazards and hazardous materials impacts related to development under the Certified EIR to a less than significant level. The Certified EIR concluded that the Approved (Baseline) Project would not have a significant impact on emergency plans and response and identified high fire hazard areas within open space, undeveloped land northeast of, and adjacent to, PA 51. Although the Proposed Project would result in slightly higher residential uses than the Approved Project, development will occur in the same Districts planned for development in the Certified EIR. With regards to the Property Exchange, no change in the allowable uses or intensity of development within Districts would occur beyond that analyzed for purposes of the Zone Change and Implementing Approvals as discussed herein. Therefore, no additional impacts related to hazards and hazardous materials would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p>						
<p>The Certified EIR identified Mitigation Measures HH-1 through HH-6 which, if fulfilled, would reduce hazards and hazardous materials impacts related to development under the Certified EIR to a less than significant level. The measures are applicable to future development under the Proposed Project.</p>						
<p>HH-1 For any remaining structures known to contain ACMs that will be renovated and/or demolished, HF shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.</p> <p>Prior to occupancy, renovation or demolition of any remaining structures constructed before October 1988, and in which the presence of ACMs is unknown, an asbestos survey shall be conducted by Heritage Fields. This requirement can be waived if an architect or project engineer responsible for the construction of the structure or an accredited asbestos inspector signs a statement that no ACM was specified as a building material, and to the best of their knowledge, no ACMs were used as a building material. If the asbestos survey identifies ACMs, the applicant shall ensure that all asbestos is removed and disposed of in accordance with applicable federal, state and local regulatory requirements.</p> <p>Any existing structures in which ACMs have been identified and which will remain in use shall be addressed in an Operation and Maintenance Plan and must be managed in accordance with applicable laws.</p> <p>Any renovation and/or LBP abatement activities on residential units at former MCAS El Toro, shall be conducted in accordance with all applicable federal, state and local regulatory requirements.</p>						
<p>HH-2 The portions of the Proposed Project Site located on the active Installation Restoration Program ("IRP") Sites listed in Table 5.54-2, Action Required IRP Sites and Zoning – 2012 Modified Project, of the DSSEIR for the 2012 Modified Project shall be used only in accordance with the requirements of the applicable Final FOST or Finding of Suitability to Lease, including in strict compliance with all lease restrictions (such as restrictions against soil or groundwater disturbance without approval from the Navy and regulators) and all institutional controls (such as restrictions against disturbing the integrity of physical remedial components like caps or groundwater treatment systems and other restrictions imposed by the Navy).</p>						
<p>HH-3 The Community Development Department, in coordination with the Orange County Fire Authority ("OCFA"), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures and based on the revised Fire Hazard Maps, the 2012 Modified Project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.</p>						

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HH-4	Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro, a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.					
HH-5	Prior to the issuance of a grading permit, the applicant shall prepare and the Director of Community Development shall approve a protocol plan (including but not limited to worker training, health and safety precautions, additional testing requirements, and emergency notification procedures) in the event that unknown hazardous materials are discovered during grading, construction, and/or related development activities. Additionally, said protocol plan will be revised should the discovery of previously unknown hazardous materials be made during any of the above-mentioned development activities. The applicant and/or property owner that discovers contamination due to past military operations not previously identified by the DON shall be responsible for notifying the DON, appropriate regulatory agencies, and the Director of Community Development of the City in a timely manner. Additionally, said Protocol Plan shall be revised should the discovery of previously unknown hazardous materials be made during any of the above-mentioned development activities.					
HH-6	The City shall develop and maintain the location and status, as well as other pertinent information, of all monitoring wells on the former MCAS El Toro in a geographic information systems database ("GIS"). The City will review all permit applications on the former air station for monitoring well locations that may be affected by a permit, and require applicants to maintain appropriate access. Access to monitoring wells will be limited to authorized personnel.					
Additionally, the Certified EIR identified PPPs that would help reduce or avoid potential hazards and hazardous materials impacts.						
PPP 5-1	If any underground storage tanks ("USTs") are encountered during site grading and excavation activities, they shall be removed in accordance with the existing standards and regulations of, and oversight by, the Orange County Health Care Agency ("OCHCA"), based on compliance authority granted through the California Code of Regulations, Title 23, Division 3, Chapter 16, Underground Tank Regulations. The process for UST removal is detailed in the OCHCA's "Underground Storage Tanks: The Basics." Soil samples from areas where storage tanks have been removed or where soil contamination is suspected shall be analyzed for hydrocarbons including gasoline and diesel in accordance with procedures set forth by OCHCA. If hydrocarbons are identified in the soil, the appropriate response/remedial measures will be implemented as directed by OCHCA with support review from the Regional Water Quality Control Board until all specified requirements are satisfied and a Tank Closure Letter is issued. Any aboveground storage tank ("AST") in existence at the commencement of site development shall be removed in accordance with all applicable regulations under the oversight of Orange County Fire Authority. Compliance requirements relative to the removal/closure of storage tanks are set forth through the California Health and Safety Code, Sections 25280 through 25299.					
PPP 5-2	During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1532.1, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practice by workers exposed to lead. Lead-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision(s) of the California Health and Safety Code.					
PPP 5-3	Prior to approval of a conditional use permit, project applicants shall prepare a Fire Master Plan for submittal to the Orange County Fire Authority ("OCFA") consistent with OCFA Guideline B-09 (Fire Master Plans for Commercial and Residential Development).					
PPP 5-4	Federal law requires compliance with Rule 29 of the Code of Federal Regulations ("CFR") Part 1926. Prior to site demolition activities, building materials shall be carefully assessed for the presence of lead-based paint, and its removal, where necessary, must comply with state and federal regulations, including Occupational Safety and Health Administration ("OSHA") 29 CFR Part 1926. The OSHA rule establishes standards for occupational health and environmental controls for lead exposure. The standard also includes requirements addressing exposure assessment, methods of compliance, respiratory protection, protective clothing and equipment, hygiene facilities and practices, medical surveillance, medical removal protection, employee information and training, signs, recordkeeping, and observation of monitoring. Furthermore, the requirements of California Code of Regulations, Title 17, Division 1, Chapter 8, identify procedures that must be followed for accreditation, certification, and work practices for lead-based paint and lead hazards. Section 36100 thereof specifically sets forth requirements for lead-based paint abatement in public and residential buildings.					

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<p>PPP 5-5 Prior to site demolition activities, building materials must be carefully assessed for the presence of asbestos-containing materials ("ACM"), and removal of this material, where necessary, must comply with state and federal regulations, including SCAQMD Rule 1403, which specifies work practices with the goal of minimizing asbestos emissions during building demolition and renovation activities, including the removal and associated disturbance of ACMs. The requirements for demolition and renovation activities include asbestos surveying; notification; ACM removal procedures and time schedules; ACM handling and cleanup procedures; and storage, disposal, and landfill disposal requirements for asbestos-containing waste materials.</p> <p>PPP 5-6 During site decommissioning and demolition activities, hazardous wastes must be managed in accordance with the requirements of Title 22, Division 4.5 of the California Code of Regulations. Title 22 sets forth the requirements with which hazardous-waste generators, transporters, and owners or operators of treatment, storage, or disposal facilities must comply. These regulations include the requirements for packaging, storage, labeling, reporting, and general management of hazardous waste prior to shipment. In addition, the regulations identify standards applicable to transporters of hazardous waste such as the requirements for transporting shipments of hazardous waste, manifesting, vehicle registration, and emergency accidental discharges during transportation.</p> <p>PPP 5-7 During demolition, grading, and excavation, workers shall comply with the requirements of Title 8 of the California Code of Regulations, Section 1529, which provides for exposure limits, exposure monitoring, respiratory protection, and good working practices by workers exposed to asbestos. Asbestos-contaminated debris and other wastes shall be managed and disposed of in accordance with the applicable provision(s) of the California Health and Safety Code.</p> <p>PPP 5-8 Evidence of soil and/or groundwater contamination (e.g., chemical odors, staining) unrelated to above/underground storage tank releases may be encountered during site development. The appropriate agency (e.g., OCHCA, DTSC, or the RWQCB) shall be notified if these conditions are encountered during construction or grading activities. With their oversight, an environmental site assessment shall be completed and a determination shall be made as to whether cleanup is required. Cleanup activities are required to be consistent with all applicable federal, State and local rules, regulations, and laws. A cleanup would not be considered complete until confirmatory samples of soil and/or groundwater reveal levels of contamination below the standards established by the oversight agency. Alternatively, a risk assessment may be prepared for the site to determine that there are no human or environmental risks associated with leaving contamination below specific levels in place. Construction in the impacted area shall not proceed until a "no further action" clearance letter or similar determination is issued by the oversight agency, or until a land use covenant is implemented.</p>						
X. HYDROLOGY AND WATER QUALITY. Would the project:						
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?						•
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?						•
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:						•
i) result in a substantial erosion or siltation on- or off-site;						•
ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;						•
iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or						•

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iv) impede or redirect flood flows?						•
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?						•
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?						•

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<p>The Certified EIR identified Mitigation Measures H/WQ1 through H/WQ4 which, if fulfilled, would reduce hydrology and water quality impacts related to development under the Certified EIR to a less than significant level. The Certified EIR found that impacts related to the alteration of existing drainage patterns and stream courses and impacts related to development within potential flood hazard areas would be less than significant after implementation of Mitigation Measures HW/Q31 through HW/Q4 adopted in the MMRP for the Approved (Baseline) Project, which are incorporated into the Proposed Project. Although the Proposed Project would result in the conversion of non-residential square-footage to 1,300 additional residential units, development will occur in the same Districts planned for development in the Certified EIR and would be required to comply with City grading and water quality regulations, including the NPDES discharge permitting requirements and preparation of a Storm Water Pollution Prevention Plan (SWPPP) and a Water Quality Management Plan (WQMP). With regards to the Property Exchange, no change in the allowable uses or intensity of development within Districts would occur beyond that analyzed for purposes of the Zone Change and Implementing Approvals as discussed herein. The Proposed Project would not increase the amount of impervious surfaces on the Project Site. Therefore, no additional impacts related to hydrology and water quality would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p> <p>Mitigation Measures H/WQ-1 through H/WQ-3, as identified in the Certified EIR, remain applicable to the Proposed Project and shall be implemented to ensure that potential impacts related to hydrology and water quality continue to be reduced to a less than significant level. These measures are listed below.</p> <p>H/WQ1 Prior to issuance of a grading permit, the applicant shall provide evidence that the development of the project area shall comply with City of Irvine adopted Grading and Water Quality Ordinances to ensure that the potential for soil erosion is minimized on a project-by-project basis. Specifically, the NPDES discharge permitting requirements to which the City is obligated will ensure that construction activities reduce, to the maximum extent feasible, the water quality impacts of construction activities. The NPDES permit guidance states that "industrial/commercial construction operations that result in a disturbance of one acre or more of total land area...and residential construction sites that result in the disturbance of five acres or more...shall be required to develop and implement BMPs...to control erosion and siltation and contaminated runoff from the construction sites." Note: In March 2003 this provision will apply to residential construction sites that result in the disturbance of one acre or more.</p> <p>The City's standard conditions of approval indicate that a Storm Water Pollution Prevention Plan (SWPPP) shall be prepared prior to the approval of grading permits for any project site in order to reduce sedimentation and erosion. The SWPPP shall include the adoption of erosion and sediment control practices such as desilting basins and construction site chemical control management measures.</p> <p>Additionally, prior to the issuance of a grading permit, project applicants must submit, and the Director of Community Development or designee must have approved, a Water Quality Management Plan (WQMP). The WQMP must identify the Best Management Practices (BMPs) that will be used on the site to control predictable pollutant runoff after the site is occupied. Ongoing operations after construction would be subject to the Countywide Municipal NPDES Stormwater Permit, for which the City is a Co-Permittee. This WQMP shall identify, at a minimum, the routine, structural, and non-structural measures specified in the Countywide NPDES DAMP Appendix which they are applicable to a project, the assignment of long-term maintenance responsibilities (specifying the developer, parcel owner, maintenance association, lessee, etc.), and shall reference the location(s) of structural BMPs.</p> <p>Also, in accordance with standard City project permitting and approval procedures, Notices of Intent (NOI) for coverage of projects under the General Construction Activity Storm Water Runoff Permit will be submitted to the State Water Resources Control Board prior to issuance of grading permits in the project area. This requirement will be met to the satisfaction of the Director of Community Development of any disturbance of one acre or more of soil in the project area. Also, in force during the period of construction would be the General Dewatering NPDES permit of the Santa Ana RWQCB, as well as the provisions of the Countywide Permit.</p> <p>The Mitigation Measures will be implemented in accordance with local and State regulatory requirements. As future projects are planned and designed in the project area, specific BMPs and other water quality control methods will be utilized to reduce water quality degradation in the Newport Bay watershed. Future projects in the proposed project area will acknowledge and implement</p>						

those additional requirements that may be imposed by RWQCB in the future. Compliance with these measures shall be verified by the Community Development Department.

H/WQ2 Prior to issuance of a grading permit, evidence (e.g., in the form of a construction management plan) shall be provided that demonstrates that all stormwater runoff and dewatering discharges from the project area shall be managed to the maximum extent practicable or treated as appropriate to comply with water quality requirements identified in the Santa Ana Regional Water quality Control Board Basin Plan, including Total Maximum Daily Load (TMDL) Implementation Plan adopted for this watershed.

H/WQ3 Prior to approval of the first tentative tract or parcel map in the project area, detailed hydrologic and hydraulic analysis shall be conducted. Studies and analysis shall be prepared in accordance with OCFCD methodologies and standards and the Flood Control Master Plan for San Diego Creek, as well as any additional guidelines in effect at the time of project design. Recommendations contained in the hydrology studies and/or hydraulic analysis to address drainage/flooding issues related to proposed development shall be implemented. Compliance with this measure shall be verified by the Community Development Department.

H/WQ4 Prior to issuance of a building permit for any unit within the 100-year floodplain, developers with property located in the newly delineated 100-year floodplain shall be required to construct such improvements as necessary to remove the property from the 100-year floodplain. Additionally, the developer shall prepare a Letter of Map Revision (LOMR) request to have the FIRMs revised to remove the development areas from the 100-year floodplain upon completion of the approved flood control facilities. The LOMR request shall be filed upon completion of design of the flood control improvements to contain or redirect the 100-year flood flows away from the property.

After the improvements are constructed, Record Drawings and a maintenance agreement with, or letter from, a public agency shall be submitted to FEMA to complete the LOMR process.

Additionally, the Certified EIR identified PPPs that will help reduce or avoid potential hydrology and water quality impacts, and would be applicable to the Proposed Project.

PPP 6-1 Prior to the issuance of a precise grading permit, the applicant shall submit a hydrology and hydraulic analysis of the site. The analysis shall be prepared by a professional civil engineer versed in flood control analysis and shall include the following information and analysis (Standard Condition A.6):

- Hydrology/hydraulic analysis of 100-year surface water elevation at the project site to determine building elevation or flood proofing elevation.
- Analysis of existing and post-development peak 100-year storm flow rates, including mitigation measures to reduce peak flows to existing conditions.
- An analysis demonstrating that the volume of water ponded on the site and stored underground in the drainage system outside of the building envelope in the proposed condition is greater than or equal to the corresponding volume in the existing condition. The water surface used to determine the ponded volume shall be based on the water surface in the major flood control facility that the site is tributary to.

PPP 6-2 Prior to the issuance of a precise grading permit, the applicant shall submit a groundwater survey of the site. The analysis shall be prepared by a geotechnical engineer versed in groundwater analysis and shall include the following information and analysis (Standard Condition A.7):

- Potential for perched groundwater intrusion into the shallow groundwater zone upon buildout.
- Analysis for relief of groundwater buildup and properties of soil materials on-site.
- Impact of groundwater potential on building and structural foundations.
- Proposed mitigation to avoid potential for groundwater intrusion within five feet of the bottom of the footings.

PPP 6-3 This project will result in soil disturbance of one or more acres of land that has not been addressed by an underlying subdivision map. Prior to the issuance of preliminary or precise grading permits, the applicant shall provide the City Engineer with evidence that a Notice of Intent (NOI) and relevant Permit Registration Documents have been filed with the State Water Resources Control Board and that a Waste Discharge Identification ("WDID") Number is issued. Such evidence shall consist of a copy of the NOI Receipt letter with WDID retrieved from the State Water Resources Control Board Stormwater Multi-Application and Report Tracking System (SMARTS) website or the Regional Water Quality Control Board, or a letter from either agency stating that the NOI has been filed (Standard Condition A.10).

PPP 6-4 Prior to the issuance of precise grading permits, the applicant shall submit, and the Director of Community Development shall have approved, a project water quality management plan (WQMP). The WQMP shall identify the best management practices that will be used on the site to control predictable pollutant runoff (Standard Condition A.13).

Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Resulting in New Significant Impacts	New Information Resulting in More Severe Impacts	New Information Identifying New Mitigation Measures Available to Reduce Significant Impacts	Less-Than-Significant Impact/No Substantial Change from Previous Analysis
XI. LAND USE AND PLANNING. Would the project:						
a) Physically divide an established community?						•
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?						•
<p>The Certified EIR concluded that no impacts related to the physical division of an established community would occur because there were no residents living within the PA 51 at the time the 2012 SSEIR was prepared. In addition, preservation lands included in PA 51 as part of the project were determined to be consistent with the Orange County Central-Coastal NCCP. A detailed General Plan and Zoning Ordinance consistency analysis conducted in the Certified EIR also concluded that the project was consistent with the applicable goals and policies of the General Plan and the SCAG 2008 and 2012 Regional Comprehensive Plan. Consistency with SCAG's Compass Blueprint 2% Strategy Area Principles and Orange County's Sustainability Communities Strategy was also included and determined to be consistent. Although the Proposed Project would result in the conversion of non-residential square-footage to 1,300 additional residential units, development will occur in the same Districts planned for development in the Certified EIR. Additionally, the uses authorized by the proposed zone changes would be consistent with the zoning and uses in other parts of the Great Park Neighborhoods and residential densities would be consistent with other areas of the Great Park Neighborhoods. With regards to the Property Exchange, no change in the allowable uses or intensity of development within Districts would occur beyond that analyzed for purposes of the Zone Change and Implementing Approvals as discussed herein. Therefore, no additional impacts related to land use and planning would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p> <p>No mitigation measures related to land use and planning were outlined in the Certified EIR.</p>						
XII. MINERAL RESOURCES. Would the project:						
a) Result in the loss of availability of a known mineral resource that would be a value to the region and the residents of the state?						•
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?						•
<p>The Certified EIR concluded that no impact to mineral resources would occur because there are no known mineral resources within the Proposed Project boundaries. No mitigation measures for mineral resources were required.</p> <p>No mitigation measures related to mineral resources were outlined in the Certified EIR.</p>						
XIII. NOISE. Would the project result in:						
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?						•
b) Generation of excessive groundborne vibration or groundborne noise levels?						•
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?						•
This resource is evaluated in more detail in Chapter 3 of this addendum.						

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XIV. POPULATION AND HOUSING. Would the project:						
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?						•
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?						•
<p>The Certified EIR concluded that up to 10,700 dwelling units could be developed on the Proposed Project Site with no significant impact related to population and housing. Irvine's projected jobs-housing balance with the Approved (Baseline) Project improves from 2.48 in 2010 to 2.32 in 2020 and 2.39 in 2035. The Proposed Project involves the conversion of approximately 755,552 square feet of non-residential to 1,300 condominium units. The jobs-housing balance within Planning Area 51 goes from 1.56 to 1.12 with the Proposed Project. Therefore, the Proposed Project would improve the 2.39 jobs-housing balance projected for the City in 2035. Additionally, the Proposed Project would help the City achieve its Regional Housing Needs Allocation identified in the City's adopted Housing Element. Therefore, no additional impacts related to population and housing would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p> <p>No mitigation measures related to population and housing were outlined in the Certified EIR. However, one PPP was included in the Certified EIR that would reduce potential population and housing impacts.</p> <p>PPP 9-1 Compliance with the City's Housing Element. Compliance with the City's Housing Element policies provides a strategic blueprint to ensure the siting of new very low, low, and moderate-income housing units in future development projects under the 2012 Modified Project to help the City continue to meet its State fair share housing targets. The Housing Ordinance mandates that all projects with 50 or more housing units shall set-aside 15 percent of the total units for very low, low, and moderate-income households.</p>						
XV. PUBLIC SERVICES. Would the project:						
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:						•
Fire protection?						•
Police protection?						•
Schools?						•
Parks?						•
Other public facilities?						•

Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Resulting in New Significant Impacts	New Information Resulting in More Severe Impacts	New Information Identifying New Mitigation Measures Available to Reduce Significant Impacts	Less-Than-Significant Impact/No Substantial Change from Previous Analysis
<p>Fire Protection and Emergency Services</p> <p>The Certified EIR concluded that up to 10,700 dwelling units could be developed on the Proposed Project Site with no significant impact related to fire protection. The Proposed Project involves the conversion of approximately 755,552 square feet of non-residential square footage to 1,300 condominium units. During the development review and permitting process, the Orange County Fire Authority (OCFA) would review and approve any new development plans to ensure that adequate facilities and personnel are provided to allow OCFA to serve the needs of all of Irvine residents.</p> <p>Like all development, the Proposed Project would be required to participate in a fair share funding approach in the form of a Secured Fire Protection Services Agreement (see PPP 10-4 below). The 2012 SSEIR concluded that compliance with the existing PPPs, Mitigation Measures HH-3 and HH-4, and PDF 10-1 would ensure the adequate provision of fire protection and emergency services to residents and businesses at the Project Site. Therefore, implementation of the Proposed Project would not have a significant impact on fire protection and emergency services. The conversion of non-residential square footage to 1,300 residential units would not change the requirements for a secured fire protection agreement or any of the other PPPs and mitigation measures. Therefore, the proposed zone changes and subsequent development could be accommodated without any significant impacts on fire protection and emergency services.</p>						

Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Resulting in New Significant Impacts	New Information Resulting in More Severe Impacts	New Information Identifying New Mitigation Measures Available to Reduce Significant Impacts	Less-Than-Significant Impact/No Substantial Change from Previous Analysis
<p>Police Protection</p> <p>The Proposed Project would result in slightly higher residential uses as compared to the Baseline (Approved) Project. The 1,300 additional residential units would generate approximately 2,977 additional residents and result in a need for approximately 4.5 additional officers. Additional police personnel and associated equipment would be provided through the continued implementation of the City's Strategic Business Plan and annual budget review process. Police department needs are assessed, and budget allocations are revised accordingly to ensure that adequate levels of service are maintained throughout the city. Therefore, implementation of the Proposed Project could be accommodated without any significant impacts on police services.</p> <p>During the development review and permitting process, the Irvine Police Department would review and approve any new development plans to ensure that adequate facilities and personnel are provided to allow the Irvine Police Department to serve the needs of all of Irvine residents. All standard conditions and guidelines would be applied to the Proposed Project during the normal review process, including the PPPs outlined below (PPPs 10-2, 10-3, and 10-5 through 10-8). For example, compliance with the Uniform Security Code required by PPP 10-5 would contribute to a reduction in calls for police services. Provision of the Knox boxes and key switches (PPP 10-2) and Click2enter radio access control receivers (PPP 10-3) through pedestrian and vehicle security gates would improve response times within the Proposed Project Site. Additionally, the requirement for project applicants to submit a Construction Security Plan prior to the issuance of building permits (PPP 10-6) would ensure that crime and safety issues that could occur during project construction, including theft of building materials and construction equipment, malicious mischief, graffiti, and vandalism, would not occur. Therefore, implementation of the Proposed Project would not have a significant impact on police services.</p> <p>School Services</p> <p>The 2012 SSEIR analyzed the potential impacts of developing up to 10,700 dwelling units in the service boundaries of IUSD and SVUSD, and it stated that all school impacts could be mitigated to a less-than-significant level. The Proposed Project would add an additional 1,300 condominium units within the boundaries of IUSD. Using IUSD student generation rates, the Proposed Project would result in approximately 456 additional students. According to the City's recent General Plan Update EIR, IUSD currently has a District-wide capacity of 41,834 students, with current enrollment of 35,879 students. As a result, there is currently an excess capacity of 5,955 students.¹ Payment of SB 50 school fees would address potential impacts to school facilities under CEQA pursuant to Government Code 65995 and PPP 10-9. In addition to this minimum requirement sufficient to satisfy CEQA requirements, Heritage Fields and IUSD has previously entered into a Mitigation Agreement to further address any potential impacts to IUSD, and it is anticipated that the existing agreement, or updates thereto, would similarly ensure that no additional impacts related to school services would occur as a result of the Proposed Project. The Project Applicant has been meeting with IUSD to discuss potential updates to the School Mitigation Agreement to fully mitigate any potential impacts related to the Proposed Project.² Therefore, no additional impacts to related to school services would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p> <p>Library Services</p> <p>The 2012 SSEIR analyzed the potential impacts on libraries from developing up to 10,700 dwelling units in the service boundaries of the Orange County Public Library system. The SSEIR concluded that all project-related impacts on library services would be less than significant without mitigation. The Proposed Project would involve construction of up to 1,300 additional dwelling units approximately 2,977 additional residents. However, payment of library fees pursuant to PPP 10-10 would reduce impacts on public libraries. Therefore, no additional impacts to related to library services would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p>						

¹ City of Irvine, City of Irvine 2045 General Plan Update Program EIR, Table 4.12-3b, August 2024.

² Email correspondence with Heritage Fields, LLC dated August 12, 2025.

Adherence to PPPs 10-1 through 10-4, PDF 10-1, and Mitigation Measures HH-3 and HH-4 would minimize the potential for impacts on fire protection services. Adherence to PPPs 10-2, 10-3, and 10-5 through 10-8 would minimize impacts on police services. Payment of school impact fees pursuant to PPP 10-9 and library fees pursuant to PPP 10-10 would reduce impacts on schools and public libraries.

PPP 10-1	Every project applicant shall comply with all applicable Orange County Fire Authority codes, ordinances, and standard conditions regarding fire prevention and suppression measures relating to water improvement plans, fire hydrants, automatic fire extinguishing systems, fire access, access gates, combustible construction, water availability, and fire sprinkler systems.
PPP 10-2	Prior to the approval of the first certificate of occupancy the applicant shall arrange for and have passed an inspection, to be performed by the Police Department and the Orange County Fire Authority, to ensure compliance with the Emergency Access Plan requirements. The inspector shall verify test acceptance and locations of all Knox boxes and key switches as depicted on the approved plan (Standard Condition 4.9).
PPP 10-3	Prior to the issuance of the first building permit, the applicant shall submit and have approved by the Chief of Police an Emergency Access Plan, which identifies and locates all Knox Boxes, Knox key switches, and Click2Enter radio access control receivers. Said plan shall be incorporated into the plan set approved for building permits (Standard Condition 3.17).
PPP 10-4	Prior to the issuance of the first building permit, the applicant shall have executed a Secured Fire Protection Agreement with the Orange County Fire Authority (Standard Condition A.15).
PPP 10-5	The project applicant shall comply with all applicable requirements of the City of Irvine Uniform Security Code (Municipal Code Title 5, Division 9, Chapter 5).
PPP 10-6	Prior to the issuance of the first building permit, a Construction Site Security Plan, per the Irvine Uniform Security Code, Section 5-9-521, shall be approved by the Chief of Police. Said plan shall be incorporated into the plan set approved for building permits (Standard Condition 3.20).
PPP 10-7	Prior to approval of the first certificate of occupancy, the project applicant shall demonstrate to the City's Police Department that an Opticom traffic light control system has been installed at all signalized intersections servicing or adjacent to the Proposed Project Site (Condition of Approval).
PPP 10-8	The project applicant shall implement the concepts of Crime Prevention Through Environmental Design in the design and layout of individual development projects within the Proposed Project Site to reduce criminal opportunity and calls for police service. Implementation of these concepts shall be verified by the City's Police Department during the development review process (Condition of Approval).
PPP 10-9	Pursuant to California Government Code Section 65995, the individual applicants shall pay developer fees to the appropriate school districts at the time building permits are issued; payment of the adopted fees would provide full and complete mitigation of school impacts. Alternatively, the applicant may enter into a school finance agreement with the school district(s) to address mitigation to school impacts in lieu of payment of developer fees. The agreement shall establish financing mechanisms for funding facilities to serve the students from the project. If the applicant and the affected school district(s) do not reach a mutually satisfying agreement, then project impacts would be subject to developer fees.
PPP 10-10	In the event that a city-wide library impact fee is adopted and in force, the developer shall pay this fee prior to issuance of building permits for new development. Since a 39,000 square foot library facility is approved for development within Existing PA 51, this would satisfy payment of a library impact fee, if adopted by the City at a future date.
PDF 10-1	The Relocated Wildlife Corridor Feature will be designed and planted in such a manner as to ensure that the planting plan does not create a fire hazard for adjacent development. Maintenance of vegetation within the Relocated Wildlife Corridor Feature is not anticipated, but would be allowed as needed for fire control. Final approval of the planting schemes and palettes will require approval from the Orange County Fire Authority.
HH-3	The Community Development Department, in coordination with the Orange County Fire Authority (OCFA), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures, the Proposed Project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.
HH-4	Prior to issuance of occupancy permits of any existing structure at the former MCAS El Toro a fire life-safety evaluation of the structure including recommendations for improvements required for compliance with current Building Codes for use of existing structures adopted by the City and plans for any required improvements shall be submitted to the Chief Building Official for review and approval.

XVI. RECREATION.

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?							•
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b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?						•
<p>The 2012 SSEIR concluded that up to 10,700 dwelling units could be developed within the Project Site with no significant impacts on recreation. The Proposed Project would involve construction of up to 1,300 additional dwelling units generating approximately 2,977 additional residents. Compliance with the City's Parkland Dedication Ordinance as implemented in accordance with the ARDA would ensure that adequate recreational facilities are provided. Per the ARDA, an additional 8.9 acres of parkland would be required. The proposed Land Exchange would not affect these requirements. Therefore, no additional impacts related to recreation would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p> <p>No PPPs, PDFs, or mitigation measures were identified in the 2012 SSEIR, and no additional measures are required.</p>						
XVII. TRANSPORTATION. Would the project:						
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?						•
b) Conflict or be inconsistent with CEQA Guidelines § 15064.3, subdivision (b)?						•
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?						•
d) Result in inadequate emergency access?						•
This resource is evaluated in more detail in Chapter 3.5 of this addendum.						
XVIII. TRIBAL CULTURAL RESOURCES.						
a) Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code § 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:						
i) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or						•
ii) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code § 5024.1. In applying the criteria set forth in subdivision (c) of Public Resource Code § 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.						•

Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Resulting in New Significant Impacts	New Information Resulting in More Severe Impacts	New Information Identifying New Mitigation Measures Available to Reduce Significant Impacts	Less-Than-Significant Impact/No Substantial Change from Previous Analysis
<p>Tribal cultural resources were not analyzed as a stand-alone topic in the prior environmental documents, however, the issue was known and they were discussed as part of cultural resources. Specifically, MM Cult-4 addresses Native American Monitors and resources. As previously discussed, the Certified EIR concluded that build out of the Proposed Project would not cause a substantial adverse change in the significance of any historical resource due to the lack of historic resources. The Certified EIR also concluded that there are no features or characteristics of the project area that define or include unique cultural values and no known or documented religious or scared uses associated with the project area. Moreover, in the responses to comments in the OCGP FEIR, it states that the City is not aware of any claims by Native Americans as to any ancestral use of any portion of the project site. Although the Proposed Project would result in slightly higher residential uses, development will occur in the same Districts planned for development in the Certified EIR. Therefore, no additional impacts related to tribal cultural resources would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p> <p>No mitigation measures related to tribal cultural resources were outlined in the Certified EIR.</p>						
XIX. UTILITIES AND SERVICE SYSTEMS. Would the project:						
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?						•
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?						•
c) Result in a determination by the waste water treatment provider, which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?						•
d) Generate solid waste in excess of state or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?						•
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?						•

Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Resulting in New Significant Impacts	New Information Resulting in More Severe Impacts	New Information Identifying New Mitigation Measures Available to Reduce Significant Impacts	Less-Than-Significant Impact/No Substantial Change from Previous Analysis
<p>The Certified EIR concluded that while demand for utilities and service systems related to potable water, recycled water, sewer, solid waste, and energy and communications, planned improvements were adequate to serve the Proposed Project and impacts related to utilities and service systems would be less than significant. Utilities for water, sewer, and electrical would be provided consistent with adopted plans for the Project Site and would not exceed the anticipated demand reported in the Certified EIR. The 2017 Planning Area 51 Sub-Area Master Plan (SAMP) Update (dated September 25, 2017) identified sewer and water capacity for up to 10,626 dwelling units and 9,420,200 square feet of non-residential (as shown on Table 1-3 of the SAMP Update), which cumulatively exceeds the amount of development anticipated for the Proposed Project. As shown in Attachment 1, the Proposed Project reduces water and sewer demand compared to the 2017 SAMP. Additionally, a Water Supply Verification (WSV) pursuant to SB 221 has been prepared for the Proposed Project (see Attachment 1). Based on the analysis of demand and supply and the referenced information, the WSV satisfies the requirements of SB 221 for the Proposed Project, and the 2012 WSA remains valid and sufficient under SB 610 for the Proposed Project.</p> <p>New facilities to support the demand for electric service in the Proposed Project would be constructed by SCE as necessitated by the demand for new service. The projected electricity consumption stated in the Certified EIR was based on the adopted 2008 Building and Energy Efficiency Standards. The 2022 Building and Energy Efficiency Standards, currently in effect, are 53 percent more efficient than the 2016 standards for residential structures. As a result, electricity consumption for the Proposed Project is substantially less than what was anticipated for the Approved (Baseline) Project in the Certified EIR. Therefore, no additional impacts related to utilities and service systems would occur as a result of the Proposed Project as compared to the Approved (Baseline) Project.</p> <p>The Certified EIR included Mitigation Measures USS-1 through USS-5, PPPs and PDFs to address potential impacts to utilities and service systems. These measures would also be applicable to the Proposed Project.</p> <p><u>Water</u></p> <p>The following PPPs and would help to reduce and avoid potential impacts related to water services:</p> <p>PPP 13-1 Requirement to Use Recycled Water: Irvine Ranch Water District (IRWD) will identify areas within the Sub Area Master Plan that are capable of receiving service from the IRWD's recycled water system, and will determine the feasibility of providing recycled water service to these areas. IRWD will also review applications for new permits to determine the feasibility of providing recycled water service to these applicants. If recycled water service is determined by IRWD to be feasible, applicants for new water service shall be required to install on-site facilities to accommodate both potable water and recycled water service in accordance with IRWD's Rules and Regulations.</p> <p>PPP 13-2 Connection Fees: The Project Applicant shall enter into agreement or agreements as necessary with IRWD to establish the appropriate financial fair share costs to be borne by the project proponent. Fair share costs may include, but are not limited to, those associated with the preparation of studies necessary to analyze the needs of the 2012 Modified Project and infrastructure expansion necessary to serve the 2012 Modified Project.</p> <p>PPP 13-3 Fire Flow Analysis: In accordance with IRWD requirements, each tentative tract map in the 2012 Modified Project must provide a fire flow analysis. If the analysis identifies any deficiencies, the developer will be responsible for any water system improvements associated with the development project required to rectify the deficiencies and meet IRWD fire flow requirements.</p> <p>The following project design features ("PDFs") would be applicable to the Proposed Project to help to reduce and avoid potential impacts related to water services and have been assumed in this section's analysis:</p>						

Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Resulting in New Significant Impacts	New Information Resulting in More Severe Impacts	New Information Identifying New Mitigation Measures Available to Reduce Significant Impacts	Less-Than-Significant Impact/No Substantial Change from Previous Analysis
PDF 4-3						
PDF 4-4						
PDF 4-5						
<u>Solid Waste</u>						
The following City plans, programs and policies would apply to the Proposed Project, and would help reduce the solid waste impacts:						
PPP 13-4						
PPP 13-5						
PPP 13-6						
PPP 13-7						
PPP 13-8						

Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Resulting in New Significant Impacts	New Information Resulting in More Severe Impacts	New Information Identifying New Mitigation Measures Available to Reduce Significant Impacts	Less-Than-Significant Impact/No Substantial Change from Previous Analysis
Five mitigation measures for solid waste impacts were recommended in the Certified EIR and are applicable to the Proposed Project.						
SW-1	It is anticipated that much of the solid waste resulting from the demolition, dismantling, or other deconstruction of the aged structures and property, including but not limited to buildings and runways, at MCAS El Toro is contaminated with lead-based paints, asbestos, or other materials that may render it unsuitable for recycling or reuse. At the sole cost and expense of the project applicant, in order to evaluate this condition and determine the feasibility of recycling of solid waste material from the MCAS El Toro site by ordinary means, a technical evaluation by a qualified environmental consultant must be conducted. The technical evaluation shall include sufficient sample testing of all types of solid waste materials to be generated by the project to analyze its composition. A copy of the full technical evaluation and its findings must be submitted to the City of Irvine Community Development Department. The City of Irvine must confirm the adequacy of the technical evaluation prior to authorizing the demolition, dismantling, or deconstruction project to proceed. If it is determined by the technical evaluation that material is contaminated and prohibited from being recycled by ordinary means, a further evaluation must be conducted to identify and evaluate other feasible methods approved by state law to divert the material from landfills. This may include the delivery of the waste material to other appropriate non-disposal or transformation facilities, such as "waste-to-energy" (WTE) plants.					
SW-2	For that solid waste which is determined to be inappropriate for recycling (as that term is defined by California Public Resources Code Section 40180), the project applicant must submit a written plan to the City and implement such plan to ensure that 75% of the material, or the maximum amount feasible as determined by the technical evaluation, is diverted from the landfill through other methods that comply with state statutes and regulations.					
SW-3	For that solid waste which the technical study deems to be suitable for recycling, the project applicant must submit a written plan to the City and implement such plan to ensure that solid waste material generated by the demolition, dismantling, or deconstruction project, land use operations and maintenance is collected by a City authorized solid waste hauler or recycling agent, and that a minimum of 75% of the solid waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180 ("Recycling" does not include transformation, as defined in Public Resources Code Section 40201).					
SW-4	<p>To ensure ongoing compliance with these mitigation measures, the project applicant will be required to submit solid waste tonnage reports to the City of Irvine on City approved forms, accompanied by "weight ticket" receipts from state-certified disposal, non-disposal, or transformation facilities, on a quarterly basis to demonstrate that solid waste diversion has occurred in accordance with these required mitigation measures and in a manner that is consistent with, and not detrimental to, the efforts of the City of Irvine to comply with AB939.</p> <p>To assure compliance with applicable statutes related to the disposal of solid waste, it is necessary for the City to require appropriate and effective mitigation measures to limit the disposal and ensure significant recycling of solid waste on-site.</p>					
SW-5	For green waste, the project applicant must submit a written plan to the City and implement such plan to ensure that the green waste material generated by landscape maintenance operations is collected by a City authorized waste hauler or recycling agent, that the maximum feasible amount of that collected green waste is recycled, and that a minimum of 50% of the green waste from the project is diverted from landfills by recycling, as that term is defined by California Public Resources Code Section 40180.					
XX. WILDFIRE. If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:						
a)	Substantially impair an adopted emergency response plan or emergency evacuation plan?					•
b)	Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?					•
c)	Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?					•

Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Resulting in New Significant Impacts	New Information Resulting in More Severe Impacts	New Information Identifying New Mitigation Measures Available to Reduce Significant Impacts	Less-Than-Significant Impact/No Substantial Change from Previous Analysis
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?						•
<p>Wildfire was not analyzed as a stand-alone topic in the prior environmental documents. However, it was discussed under the Hazards and Hazardous Material Section in the Certified EIR. The Certified EIR identified high fire hazard areas within open space, undeveloped land northeast of, and adjacent to, PA 51. With incorporation of PPP 5-3 and Mitigation Measure HH-3, the Certified EIR concluded that potential impacts related to wildland fires would be less than significant. The Proposed Project is located in a relatively level area, and there are no steep slopes where high winds can exacerbate wildfire risks. Public Resources Code 4201-4204 directs the California Department of Forestry and Fire Protection (CAL FIRE) to map fire hazard within State Responsibility Areas (SRA) based on fuel loading, slope, fire weather, and other relevant factors present, including areas where winds have been identified by the department as a major cause of wildfire spread. These zones, referred to as Fire Hazard Severity Zones (FHSZ), classify a wildland zone as Moderate, High, or Very High fire hazard based on the average hazard across the area included in the zone. The latest CAL FIRE fire hazard map for Irvine does not designate any portion of the Planning Area 51 as being in a Moderate, High, or Very High fire hazard area.³ Additionally, the conversion of non-residential square footage to 1,300 additional residential units would not alter emergency access or evacuation routes since no changes to the roadway network are necessary. Therefore, implementation of the Proposed Project could be accommodated without any significant impacts on wildfire.</p> <p>The Certified EIR concluded that Mitigation Measures HH-3 and HH-4 addressed impacts associated with the construction and operation of public facilities. These measures would be applicable to any new construction and operation of facilities for police, fire protection, park and recreation, and education services. Additionally, the Certified EIR identified PPPs that will help reduce or avoid potential public services impacts.</p> <p>HH-3 The Community Development Department, in coordination with the Orange County Fire Authority ("OCFA"), will be responsible for review of all development plans, which would include evaluation of very high fire severity zones, special fire protection plans, and any requirements for fuel modification zones. Projects potentially impacted by wildland fire hazards will be subject to OCFA Guidelines for "Development Within and Exclusion from Very High Fire Severity Zones" and "Fuel Modification Plans and Maintenance." Additionally, all demolition, renovation, and construction activities in the project area will be subject to review by OCFA to ensure adequate fire protection, water flow, emergency access, design features, etc., according to the standards of the Uniform Fire Code and the California Fire Code. Due to the implementation of these standard fire protection procedures and based on the revised Fire Hazard Maps, the 2012 Modified Project is not anticipated to result in significant short- or long-term adverse impacts related to fire hazards.</p> <p>PPP 5-3 Prior to approval of a conditional use permit, project applicants shall prepare a Fire Master Plan for submittal to the Orange County Fire Authority ("OCFA") consistent with OCFA Guideline B-09 (Fire Master Plans for Commercial and Residential Development).</p>						
XXI. MANDATORY FINDINGS OF SIGNIFICANCE.						
a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?						•

³ <https://osfm.fire.ca.gov/what-we-do/community-wildfire-preparedness-and-mitigation/fire-hazard-severity-zones/fire-hazard-severity-zones-maps-2022>, accessed May 28, 2025.

Issues	Substantial Change in Project Requiring Major EIR Revisions	Substantial Change in Circumstances Requiring Major EIR Revisions	New Information Resulting in New Significant Impacts	New Information Resulting in More Severe Impacts	New Information Identifying New Mitigation Measures Available to Reduce Significant Impacts	Less-Than-Significant Impact/No Substantial Change from Previous Analysis
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)						•
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?						•
As demonstrated in this Addendum, the Proposed Project would not result in new significant impacts, nor would it substantially increase the severity of impacts evaluated and determined in the Certified EIR. Because the Proposed Project would not meet any of the criteria identified in Section 15162 of the State CEQA Guidelines requiring preparation of a subsequent or supplemental EIR, an Addendum is the appropriate document type for the Proposed Project.						

Attachment 1
Sewer and Water Demand Calculation
And Water Supply Verification

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Table 2-1 Land Use Comparison

District	Land Use	2017 SAMP			2025 Addendum		
		Area	DU	Building Area (TSF)	Area	DU	Building Area (TSF)
2	Commercial - Community	32.0	-	102.0	-	-	-
	Commercial - General Office	127.6	-	1,600.0	73.0	-	600.0
	Commercial - Light Industrial	-	-	-	32.0	-	625.0
	Residential - Medium-Density	-	-	-	22.8	195	-
	Residential - Medium-High Density	-	-	-	31.8	427	-
	subtotal	159.6	0	1,702.0	159.6	622	1,225.0
3	Commercial - General Office	72.7	-	2,090.0	61.2	-	1,228.2
	Commercial - Institutional	28.6	-	144.4	-	-	-
	Commercial - Light Industrial	-	-	-	6.0	-	133.3
	Commercial - Cancer Hospital	-	-	-	5.5	-	170.0
	Residential - Medium-Density	-	-	-	18.9	97	-
	subtotal	101.3	0	2,234.4	101.3	138	1,531.5
6	Residential - Medium-Density	-	-	-	28.6	221	-
	Residential - Medium-High Density	39.9	778	-	223.0	1,688	-
	Residential - High Density	48.7	1,622	-	48.7	884	-
	Commercial - Community	66.7	-	600.0	-	-	-
	Commercial - General Office	162.0	-	2,450.7	17.0	-	186.0
	subtotal	317.3	2,400	3,050.7	317.3	2,793	186.0
	TOTAL	2,400	6,987.1		3,553	2,954.5	

Water Usage

Previous SAMP		Proposed Development	
Gal/OU/Day	Gal/KSF/Day	Gal/OU/Day	Gal/KSF/Day
-	17,850.0	-	-
-	115,200.0	-	43,200.0
-	-	-	43,750.0
-	-	-	58,500.0
-	-	-	68,320.0
133,050.0	-	213,770.0	-
-	150,480.0	-	88,430.4
-	6,488.0	-	-
-	-	-	9,331.0
-	-	-	38,100.0
-	-	-	29,100.0
-	-	-	6,560.0
156,976.0	-	172,521.4	-
-	-	66,300.0	-
124,480.0	-	270,080.0	-
231,946.0	-	126,412.0	-
-	105,000.0	-	-
-	176,450.4	14,256.0	-
637,876.4	-	477,048.0	-
927,904.4		863,339.4	

Table 3-1 Study Area Potable Water Demands by Land Use

District	Land Use	2017 SAMP				2025 Addendum			
		Area	DU	Building Area (TSF)	Avg Day (GPM)	Area	DU	Building Area (TSF)	Avg Day (GPM)
2	Commercial - Community	32.0	-	102.0	12	-	-	-	-
	Commercial - General Office	127.6	-	1,600.0	89	73.0	-	600.0	30
	Commercial - Light Industrial	-	-	-	-	32.0	-	625.0	28
	Residential - Medium-Density	-	-	-	-	22.8	195	-	41
	Residential - Medium-High Density	-	-	-	-	31.8	427	-	47
	subtotal	159.6	0	1,702.0	92	159.6	622	1,225.0	146
3	Commercial - General Office**	72.7	-	2,090.0	105	66.7	-	1,228.2	61
	Commercial - Institutional	28.6	-	144.4	5	-	-	-	-
	Commercial - Light Industrial	-	-	-	-	6.0	-	133.3	6
	Residential - Medium-Density	-	-	-	-	18.9	97	-	20
	Residential - Medium-High Density	-	-	-	-	9.7	41	-	5
	subtotal	101.3	0	2,234.4	110	101.3	138	1,361.5	92
6	Residential - Medium-Density	-	-	-	-	28.6	221	-	46
	Residential - Medium-High Density	39.9	778	-	86	223.0	1,688	-	188
	Residential - High Density	48.7	1,622	-	161	48.7	884	-	88
	Commercial - Community	66.7	-	600.0	73	-	-	-	-
	Commercial - General Office	162.0	-	2,450.7	123	17.0	-	186.0	10
	subtotal	317.3	2,400	3,050.7	443	317.3	2,793	186.0	331
	TOTAL				645				570

** Demand for Cancer Hospital included

Potable Water Demands

	Avg Day use Factor
Comm community gal/kst/day	175
Comm - General office gal/kst/day	72
Comm - Institutional gal/kst/day	45
Comm - Light industrial gal/kst/day	65
Res+Med Density gpd/du	300
Res+ Med High Density gpd/du	160
Res+ High Density gpd/du	143

Table 3-2 Study Area Sewer Demands by Land Use

District	Land Use	2017 SAMP				2025 Addendum			
		Area	DU	Building Area (TSF)	Avg Day (GPM)	Area	DU	Building Area (TSF)	Avg Day (GPM)
2	Commercial - Community	32.0	-	102.0	10	-	-	-	-
	Commercial - General Office	127.6	-	1,600.0	69	73.0	-	600.0	26
	Commercial - Light Industrial	-	-	-	-	32.0	-	625.0	20
	Residential - Medium-Density	-	-	-	-	22.8	195	-	21
	Residential - Medium-High Density	-	-	-	-	31.8	427	-	37
	subtotal	159.6	0	1,702.0	79	159.6	622	1,225.0	103
3	Commercial - General Office**	72.7	-	2,090.0	9	66.7	-	1,228.2	53
	Commercial - Institutional	28.6	-	144.4	3	-	-	-	-
	Commercial - Light Industrial	-	-	-	-	6.0	-	133.3	4
	Residential - Medium-Density	-	-	-	-	18.9	97	-	10
	Residential - Medium-High Density	-	-	-	-	9.7	41	-	4
	subtotal	101.3	0	2,234.4	12	101.3	138	1,361.5	71
6	Residential - Medium-Density	-	-	-	-	28.6	221	-	24
	Residential - Medium-High Density	39.9	778	-	68	223.0	1,688	-	147
	Residential - High Density	48.7	1,622	-	135	48.7	884	-	74
	Commercial - Community	66.7	-	600.0	59	-	-	-	-
	Commercial - General Office	162.0	-	2,450.7	106	17.0	-	186.0	9
	subtotal	317.3	2,400	3,050.7	368	317.3	2,793	186.0	253
	TOTAL				459				427

** Demand for Cancer Hospital included

Sewer Demands

	Avg Day use Factor
Comm community gal/day/acre	142
Comm - General office gal/day/acre	62
Comm - Institutional gal/day/acre	30
Comm - Light industrial gal/day/acre	45
Res+Med Density gpd/du	155
Res+ Med High Density gpd/du	125
Res+ High Density gpd/du	120

Table 3-3 Study Area Non Potable Water Demands by Land Use

District	Land Use	2017 SAMP				2025 Addendum			
		Area	DU	Building Area (TSF)	Avg Day (GPM)	Area	DU	Building Area (TSF)	Avg Day (GPM)
2	Commercial - Community	32.0	-	102.0	16	-	-	-	-
	Commercial - General Office	127.6	-	1,600.0	44	73.0	-	600.0	25
	Commercial - Light Industrial	-	-	-	-	32.0	-	625.0	12
	Residential - Medium-Density	-	-	-	-	22.8	195	-	7
	Residential - Medium-High Density	-	-	-	-	31.8	427	-	12
	subtotal	159.6	0	1,702.0	60	159.6	622	1,225.0	56
3	Commercial - General Office**	72.7	-	2,090.0	25	66.7	-	1,228.2	23
	Commercial - Institutional	28.6	-	144.4	16	-	-	-	-
	Commercial - Light Industrial	-	-	-	-	6.0	-	133.3	2
	Residential - Medium-Density	-	-	-	-	18.9	97	-	6
	Residential - Medium-High Density	-	-	-	-	9.7	41	-	4
	subtotal	101.3	0	2,234.4	41	101.3	138	1,361.5	35
6	Residential - Medium-Density	-	-	-	-	28.6	221	-	8
	Residential - Medium-High Density	39.9	778	-	15	223.0	1,688	-	62
	Residential - High Density	48.7	1,622	-	19	48.7	884	-	19
	Commercial - Community	66.7	-	600.0	32	-	-	-	-
	Commercial - General Office	162.0	-	2,450.7	56	17.0	-	186.0	6
	subtotal	317.3	2,400	3,050.7	122	317.3	2,793	186.0	115
	TOTAL				223				206

** Demand for Cancer Hospital included

Non Potable Demands

	Avg Day use Factor	% of use
Comm community gal/day/acre	3500	20
Comm - General office gal/day/acre	2500	20
Comm - Institutional gal/day/acre	2750	30
Comm - Light industrial gal/day/acre	2800	20
Res+Med Density gal/day/acre	2800	15
Res+ Med High Density gal/day/acre	2400	22
Res+ High Density gal/day/acre	2800	20

TECHNICAL MEMORANDUM



DOPUDJA & WELLS CONSULTING | 3080 Bristol St, Ste 520 | Costa Mesa, CA 92626

TO: Kory Lynch, Executive Vice President

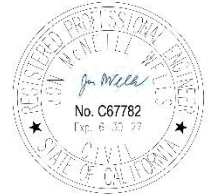
FROM: Jon Wells, P.E.

REVIEW: Stephen Dopudja, P.E.

SUBJECT: Addendum #16 to Orange County Great Park Environmental Impact Report (Sch No. 2002101020) Water Supply Verification

DATE: August 25, 2025

CC: John Leonard, P.E.



1 INTRODUCTION AND BACKGROUND

The purpose of this Technical Memorandum (TM) is to document the fact that the Irvine Ranch Water District (IRWD, District) has adequate water supply available to serve the conversion of non-residential entitlement to potentially up to 1,300 residential units now and 20 years into the future, satisfying the requirements of California State Senate Bill (SB) 221 regarding a Water Supply Verification.

2 WATER DEMANDS

A Water Supply Assessment satisfying the requirements of SB 610 was prepared, dated June 2012 (2012 WSA). The 2012 WSA is included as Attachment A to this TM. The 2012 WSA was approved by the Board of Directors of IRWD and was adopted previously by the Irvine City Council along with The Heritage Fields Project 2012 – General Plan Amendment and Zone Change in the Second Supplemental EIR in November 2013 (Great Park Neighborhoods Project). The 2012 WSA concluded that IRWD water supplies would be sufficient to meet the projected water demand associated with the proposed project, in addition to the existing and planned future uses, including, but not limited to, agricultural and industrial use. The 2012 WSA included the potential to convert 535,000 square feet of Multi-Use to up to 1,200 additional residential units.

Addendum #16 and the associated General Plan Amendment and Zone Change are part of the previously approved Great Park Neighborhoods project, and do not propose any changes to the existing residential entitlements. Therefore, the focus of this analysis is the non-residential entitlement and potential conversion to residential included in the 2012 WSA.

The first step in determining whether IRWD has adequate water supply is the estimation of water demands for the now 1,300 residential conversion units and comparison to what was included in 2012 WSA.

Table 1 shows, from left to right, the development statistics included in 2012 WSA; the Existing Approved total non-residential and conversion units for Heritage Fields; the statistics being proposed with the current non-residential to residential conversion (Proposed); and the difference between the statistics analyzed in 2012 WSA and those currently proposed. Values are given in square feet (SF) and dwelling units (DU).

Table 1 – Development Intensity Statistics

Land Use	WSA Projection	Existing Approved	Proposed	Difference +/-
Medical & Science	3,364,000 SF	660,890 SF	660,890 SF	(2,703,110) SF
Multi-Use	783,200 SF	189,062 SF	2,636,200 SF	1,853,000 SF
Community Commercial	220,000 SF	91,238 SF	91,238 SF	(128,762) SF
Residential	1,200 DU	0 DU	1,300 DU	100 DU
Warehouse	- SF	758,320 SF	758,320 SF	758,320 SF

Table 2 shows the differences from Table 1 with the water demand factors utilized in the WSA applied to each land use category. Water demand factors are given in terms of gallons per day per 1,000 square feet (gpd/ksf) and gallons per day per dwelling unit (gpd/DU).

Table 2 – Water Demand Differences

Land Use	Change Resulting from Proposed Project, +/-	Demand Factor	Water Demand Difference (gpd)
Medical & Science	(2,703,110) SF	72 gpd/ksf	(194,624)
Multi-Use	1,853,000 SF	72 gpd/ksf	133,416
Community Commercial	(128,762) SF	175 gpd/ksf	(22,533)
Residential	100 DU	300 gpd/DU	30,000
Warehouse	758,320 SF	70 gpd/ksf	53,082
Net Difference			(659)

As shown in Table 2, there is a net decrease in water demand with the proposed Project compared to what was previously analyzed in 2012 WSA, so the conclusions reached in that WSA remain valid related to the overall non-residential and potential residential conversion demands within the project area.

3 WATER SUPPLY

The next step in the analysis is the validation of the availability of water to supply for the proposed Project. Since it has been demonstrated that the demands within the Project area have not increased over that analyzed in 2012 WSA, the current water supply condition was evaluated compared to that of 2012, when the WSA was prepared.

IRWD's 2020 Urban Water Management Plan (2020 UWMP) dated June 2021 and approved by the IRWD's Board of Directors on June 28, 2021, sets forth demand projections including all previously approved projects (which includes the Great Park Neighborhoods Project) out to the year 2040. Based on sources of supply found to be reasonably available and reliable, the UWMP concludes IRWD has adequate water supply for normal, single-dry and multiple-dry years over this period of time. For more detailed information, reference is made to IRWD's 2020 UWMP on their website at <https://www.irwd.com/doing-business/urban-water-management-plan>.

4 WATER DISTRIBUTION

All the water distribution facilities needed to provide sufficient pressures and volumes of water within the Project are either existing or will be funded by the developer of the Great Park Neighborhoods Project and/or funds derived from a public financing district such as a Community Facilities District, as was true at the time of the 2012 WSA.

5 CONCLUSION

Based on the above analysis of demand differences compared to the 2012 WSA and supply available as referenced, this Water Supply Verification satisfies the requirements of SB 221 for the proposed Project, and the 2012 WSA remains valid and sufficient under SB 610 for the proposed Project.

Attachment A

Appendix L
2012 Water Supply Assessment

Appendices

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**IRVINE RANCH WATER DISTRICT
ASSESSMENT OF WATER SUPPLY**
Water Code §10910 et seq.

To: (Lead Agency)

City of Irvine
P.O. Box 19575
Irvine, CA 92623-9575

(Applicant)
Heritage Fields El Toro, LLC
25 Enterprise, Suite 400
Aliso Viejo, CA 92656

Project Information

Project Title: Heritage Fields Project 2012 – General Plan Amendment and Zone Change (Exhibit A)

- ☐ Residential: No. of dwelling units: _____
- ☐ Shopping center or business: No. of employees _____ Sq. ft. of floor space _____
- ☐ Commercial office: No. of employees _____ Sq. ft. of floor space _____
- ☐ Hotel or motel: No. of rooms _____
- ☐ Industrial, manufacturing or processing: No. of employees _____ No. of acres _____
Sq. ft. of floor space _____
- ☒ Mixed use (check and complete all above that apply) (see Exhibit B) _____
- ☐ Other: _____

Assessment of Availability of Water Supply

On June 11, 2012 the Board of Directors of the Irvine Ranch Water District (IRWD) approved the within assessment and made the following determination regarding the above-described Project:

- ☒ The projected water demand for the Project ☐ was ☒ was not included in IRWD's most recently adopted urban water management plan.
- ☒ A sufficient water supply is available for the Project.
The total water supplies available to IRWD during normal, single-dry and multiple-dry years within a 20-year projection will meet the projected water demand of the Project in addition to the demand of existing and other planned future uses, including, but not limited to, agricultural and manufacturing uses.
- ☐ A sufficient water supply is not available for the Project. [Plan for acquiring and developing sufficient supply attached. Water Code § 10911(a)]

The foregoing determination is based on the following Water Supply Assessment Information and supporting information in the records of IRWD.

Signature

Date

Title

Water Supply Assessment Information

Purpose of Assessment

Irvine Ranch Water District ("IRWD") has been identified by the City as a public water system that will supply water service (both potable and nonpotable) to the project identified on the cover page of this assessment (the "Project"). As the public water system, IRWD is required by Section 10910 *et seq.* of the Water Code to provide the City with an assessment of water supply availability ("assessment") for defined types of projects. The Project has been found by the City to be a project requiring an assessment. The City is required to include this assessment in the environmental document for the Project, and, based on the record, make a determination whether projected water supplies are sufficient for the Project and existing and planned uses.

Water Code Section 10910 (the "Assessment Law") contains the requirements for the information to be set forth in the assessment.

Prior Water Supply Assessments

IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area. Because of IRWD's aggregation of demands and supplies, each assessment completed by IRWD is expected to be generally similar to the most recent assessment, with changes as needed to take into account changes, if any, in demands and supplies, and any updated and corrected information obtained by IRWD. Previously assessed projects' water demands will be included in the baseline. A newly assessed project's water demand will have been included in previous water supply assessments for other projects (as part of IRWD's "full build-out" demand) to the extent of any land use planning or other water demand information for the project that was available to IRWD.

The Project's water demand was included (as part of IRWD's "full build-out" demand) in previous water supply assessments performed by IRWD, based on land use planning information then available to IRWD. In this water supply assessment, the Project demand will be revised in accordance with updated information provided by the applicant and included in the "with project" demand.

Supporting Documentation

IRWD prepares two planning documents to guide water supply decision-making. IRWD's principal planning document is IRWD's "Water Resources Master Plan" ("WRMP"). The WRMP is a comprehensive document compiling data and analyses that IRWD considers necessary for its planning needs. IRWD also prepares an Urban Water Management Plan ("UWMP"), a document required by statute. The UWMP is based on the WRMP, but contains defined elements as listed in the statute (Water Code Section 10631, *et seq.*), and as a result, is more limited than the WRMP in the treatment of supply and demand issues. Therefore, IRWD primarily relies on its most recent WRMP. The UWMP is required to be updated in years ending with "five" and "zero," and IRWD's most recent update of that document was adopted June 13, 2011.

In addition to the WRMP and the 2010 UWMP mentioned above, other supporting documentation referenced herein is found in Section 6 of this assessment.

Due to the number of contracts, statutes and other documents comprising IRWD's written proof of entitlement to its water supplies, in lieu of attachment of such items, they are identified by title and summarized in Section 2(b) of this assessment (written contracts/proof of entitlement). Copies of the summarized items can be obtained from IRWD.

Assessment Methodology

Water use factors; dry-year increases. IRWD employs water use factors to enable it to assign water demands to the various land use types and aggregate the demands. The water use factors are based on average water use and incorporate the effect of IRWD's tiered-rate conservation pricing and its other water conservation programs. The factors are derived from historical usage (billing data) and a detailed review of water use factors within the IRWD service areas conducted as a part of the WRMP. System losses at a rate of approximately 5% are built into the water use factors. Water demands also reflect normal hydrologic conditions (precipitation). Lower levels of precipitation and higher temperatures will result in higher water demands, due primarily to the need for additional water for irrigation. To reflect this, base (normal) WRMP water demands have been increased 7% in the assessment during both "single-dry" and "multiple-dry" years. This is consistent with IRWD's 2010 UWMP and historical regional demand variation as documented in the Metropolitan Water District of Southern California's ("MWD's") Integrated Resources Plan (1996) (Volume 1, page 2-10).

Planning horizon. For consistency with IRWD's WRMP, the assessment reviews demands and supplies through the year 2032, which is considered to represent build-out or "ultimate development".

Assessment of demands. Water demands are reviewed in this assessment for three development projections (to 2032):

- Existing and committed demand (without the Project) ("baseline"). This provides a baseline condition as of the date of this assessment, consisting of demand from existing development, plus demand from development that has both approved zoning and (if required by the Assessment Law) an adopted water supply assessment.
- Existing and committed demand, plus the Project ("with-project"). This projection adds the Project water demands to the baseline demands.
- Full WRMP build-out ("full build-out"). In addition to the Project, this projection adds potential demands for all presently undeveloped areas of IRWD based on current general plan information, modified by more specific information available to IRWD, as more fully described in Chapter 2 of the WRMP.

Assessment of supplies. For comparison with demands, water supplies are classified as *currently available* or *under development*:

- *Currently available* supplies include those that are presently operational, and those that will be operational within the next several years. Supplies expected to be operational in the next several years are those having completed or substantially completed the environmental and regulatory review process, as well as having necessary contracts (if any) in place to move forward. These supplies are in various stages of planning, design, or construction.

- In general, supplies *under development* may necessitate the preparation and completion of environmental documents, regulatory approvals, and/or contracts prior to full construction and implementation.

IRWD is also evaluating the development of additional supplies that are not included in either *currently available* or *under-development* supplies for purposes of this assessment. As outlined in the WRMP, prudent water supply and financial planning dictates that development of supplies be phased over time consistent with the growth in demand.

Water supplies available to IRWD include several sources: groundwater pumped from the Orange County groundwater basin (including the Irvine Subbasin); captured local (native) surface water; reclaimed wastewater, and supplemental imported water supplied by MWD through the Municipal Water District of Orange County ("MWD OC"). The supply-demand comparisons in this assessment are broken down among the various sources, and are further separated into potable and nonpotable water sources.

Comparison of demand and supply. The three demand projections noted above (baseline, with-project and full build-out) are compared with supplies in the following ways:

- On a total *annual* quantity basis (stated in acre-feet per year (AFY)).
- On a *peak-flow* (maximum day) basis (stated in cubic feet per second (cfs)).
- Under three climate conditions: base (normal) conditions and single-dry and multiple-dry year conditions. (Note: These conditions are compared for *annual* demands and not for *peak-flow* demands. *Peak-flow* is a measure of a water delivery system's ability to meet the highest day's demand of the fluctuating demands that will be experienced in a year's time. Peak demands occur during the hot, dry season and as a result are not appreciably changed by dry-year conditions; dry-year conditions do affect *annual* demand by increasing the quantity of water needed to supplement normal wet-season precipitation.)

Summary of Results of Demand-Supply Comparisons

Listed below are Figures provided in this assessment, comparing projected potable and nonpotable water supplies and demands under the three development projections:

- Figure 1: Normal Year Supply and Demand – Potable Water
- Figure 2: Single Dry-Year Supply and Demand – Potable Water
- Figure 3: Multiple Dry-Year Supply and Demand – Potable Water
- Figure 4: Maximum-Day Supply and Demand – Potable Water
- Figure 5: Normal Year Supply and Demand – Nonpotable Water
- Figure 6: Single Dry-Year Supply and Demand – Nonpotable Water
- Figure 7: Multiple Dry-Year Supply and Demand – Nonpotable Water
- Figure 8: Maximum-Day Supply and Demand – Nonpotable Water

It can be observed in the Figures that IRWD's *supplies* remain essentially constant between normal, single-dry and multiple-dry years. This result is due to the fact that groundwater and MWD imported water account for all of IRWD's potable supply, and reclaimed water, groundwater and imported water comprise most of IRWD's nonpotable supply. Groundwater production typically remains constant or increases in cycles of dry years, even if

overdraft of the basin temporarily increases, as groundwater producers reduce their demand on imported supplies to secure reliability. (See Section 4 herein.) As to imported water, MWD's 2010 Regional Urban Water Management Plan (RUWMP) shows that MWD can maintain reliable supplies under the conditions that have existed in past dry periods through 2035, including a repeat of the 1990-1992 multiple dry-year hydrology and the 1977 single dry-year hydrology. (See Section 2(b) (1) "IMPORTED SUPPLY - ADDITIONAL INFORMATION," below, for a summary of information provided by MWD.) Reclaimed water production also remains constant, and is considered "drought-proof" as a result of the fact that sewage flows remain virtually unaffected by dry years. Only a small portion of IRWD's nonpotable supply, native water captured in Irvine Lake, is reduced in single-dry and multiple-dry years. The foregoing factors also serve to explain why there is no difference in IRWD's supplies between single-dry and multiple-dry years.

A review of the Figures indicates the following:

- *Currently available* supplies of potable water are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under the normal and both dry-year conditions through the year 2015. (Figures 1, 2 and 3.)
- Meeting both single- and multiple-dry-year annual demands for *full build-out* will require the completion of *under-development* supplies. (Figures 2 and 3.)
- Adequate *currently available* potable water supply capacity is available to meet *peak-flow* (maximum day) demands for all demand projections through the year 2032. (Figure 4.)
- With respect to nonpotable water, *currently available* supplies are adequate to meet projected annual demands for both the *baseline* and *with-project* demand projections under both dry-year conditions through the year 2020. (Figures 5, 6, 7 and 8). IRWD is proceeding with the implementation of *under-development* nonpotable supplies, as shown in the Figures, to improve local reliability during dry-year conditions.

The foregoing Figures provide an overview of IRWD potable and nonpotable water supply capabilities. More detailed information on the anticipated development and use of supplies, which incorporates source costs and reliability issues, is provided in the WRMP.

Margins of safety. The Figures and other information described in this assessment show that IRWD's assessment of supply availability contains several margins of safety or buffers:

- "Reserve" water supplies (excess of supplies over demands) will be available to serve as a buffer against inaccuracies in demand projections, future changes in land use, or alterations in supply availability.
- The potential exists for the treatment and conversion of some reserve nonpotable supplies to potable water.
- Conservative estimates of annual potable and nonpotable *imported* supplies have been made based on connected delivery capacity (by application of peaking factors as described below in Section 2, footnote 1); additional supplies are expected to be available from these sources, based on legal entitlements, historical uses and

information provided by MWD. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "**Recent Actions on Delta Pumping**," below.

- Information provided by MWD, as the imported water supplier, concerning the adequacy of its regional supplies, summarized herein, demonstrates MWD's inclusion of reserves in its regional supply assessments. In addition to MWD's existing regional supply assessments, this assessment has considered MWD information concerning recent events. See "**Recent Actions on Delta Pumping**," below.
- Although groundwater supply amounts shown in this assessment assume production levels within applicable basin production percentages described herein, production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies.

Recent Actions on Delta Pumping. The Sacramento/San Joaquin Delta (Delta) is a vulnerable component in both the State and Federal systems to convey water from northern portions of California to areas south of the Delta. Issues associated with the Delta have generally been known for years; however, most recently, the continuing decline in the number of endangered Delta smelt resulted in the filing of litigation challenging permits for the operation of the Delta pumping facilities. On August 31, 2007, a Federal court ordered interim protective measures for the endangered Delta smelt, including operational limits on Delta pumping, which will have an effect on State Water Project (SWP) operations and supplies in 2008 and subsequent years. On June 4, 2009, a federal biological opinion imposed rules that will further restrict water diversions from the Delta to protect endangered salmon and other endangered fish species. At present, several proceedings concerning Delta operations are ongoing to evaluate options to address Delta smelt impacts and other environmental concerns. In addition to the regulatory and judicial proceedings to address immediate environmental concerns, the Delta Vision process and Bay-Delta Conservation Plan process are defining long-term solutions for the Delta (MWD 2010 IRP Update). Prior to the 2007 court decision, MWD's Board approved a Delta Action Plan in May 2007 that described short, mid and long-term conditions and the actions to mitigate potential supply shortages and to develop and implement long-term solutions. To comprehensively address the impacts of the SWP cut back on MWD's water supply development targets, MWD brought to its Board a strategy and work plan to update the long-term Integrated Resources Plan (IRP) in December 2007. As part of the IRP Update, MWD developed a region-wide collaborative process that included a broad-based stakeholder involvement. MWD held several stakeholder forums in 2008 and 2009 and the MWD Board adopted the 2010 IRP Update on October 12, 2010. In the 2010 IRP Update, MWD identified changes to the long-term plan and established direction to address the range of potential changes in water supply planning. The IRP also discusses dealing with uncertainties related to impacts of climate change (see additional discussion of this below) as well as actions to protect endangered fisheries. Based on MWD's Findings and Conclusions as stated in the MWD 2010 IRP Update, MWD's reliability goal that full-service demands at the retail level will be satisfied for all foreseeable hydrologic conditions remains unchanged in the 2010 IRP Update, and MWD will accomplish this through its core resources strategies. The 2010 IRP Update emphasizes an evolving approach and suite of actions to address the water supply challenges that are posed by uncertain weather patterns, regulatory and environmental restrictions, water quality impacts and changes in the state and the region. MWD's Adaptive Resource Management Strategy includes three components: Core Resources Strategy, Supply Buffer Implementation and Foundational Actions which together provides the basis for the 2010 IRP Update. The 2010 IRP Update expands the concept of developing a planning buffer from the 2004 IRP Update by

implementing a supply buffer equal to 10 percent of the total retail demand. MWD will collaborate with the member agencies to implement this buffer through complying with Senate Bill 7 which calls for the state to reduce per capita water use 20 percent by the year 2020.

IRWD's Evaluation of Effect of Reduced MWD Supplies to IRWD: MWD states it is sufficiently reliable to meet full-service demands at the retail level for all foreseeable hydrologic conditions. For purposes of ensuring a conservative analysis, IRWD has compiled information from the prior "MWD IRP Implementation Report" (October 2010) and MWD's RUWMP (November 2010), to provide information in this assessment relative to how reduced SWP supplies could potentially affect IRWD's supplies from MWD.

Based on IRWD's evaluation of MWD's SWP supplies, IRWD estimates that the 22% used by MWD's October 2007 IRP Implementation Report as a potential reduction of MWD's SWP supplies conservatively translates to approximately 16% reduction in all of MWD's imported supplies over the years 2015 through 2035.¹ For this purpose it is assumed that MWD's total supplies consist only of imported SWP and Colorado deliveries. As shown in MWD's RUWMP (Tables A.3-7), SWP deliveries on average over the 20-year period are 1,682,000 acre-feet and Colorado base average supplies are 656,000 acre-feet. A 22% reduction of SWP supplies equates to 370,000 acre-feet which is approximately 16% of MWD's total imported supplies. Based on this estimate, this assessment projects a 16% reduction in MWD supplies available to IRWD for the years 2010 through 2035, using IRWD's connected capacity without any water supply allocation imposed by MWD. This reduction in MWD supplies is reflected in Figures 1, 2, 3, 5, 6, and 7.

As an alternative means of analyzing the 22% stated reduction, Figures 1a, 2a, and 3a show IRWD estimated supplies in all of the 5-year increments (average and single and multiple dry years) under a short-term MWD allocation scenario whereby MWD declares Shortage Stage 2 and a 10% cutback is applied to IRWD's actual usage rather than its connected capacity. In February 2009, MWD adopted a Water Supply Allocation Plan based on its declared level of shortage. In response to potential water shortages and a request by MWD to have water service providers within its service area adopt a water conservation ordinance, in February 2009, IRWD updated Section 15 of its Rules and Regulations – Water Conservation and Water Supply Shortage Program and also updated its Water Shortage Contingency Plan which is a supporting document for Section 15. Section 15 of the Rules and Regulations serves as IRWD's "conservation ordinance". As stated in IRWD's Water Shortage Contingency Plan, use of local supplies, storage and other supply augmentation measures can mitigate shortages, and are assumed to be in use to the maximum extent possible during declared shortage levels.

¹ MWD's 2010 RUWMP cites to DWR's Water Allocation Analysis dated March 22, 2010, which incorporated the Delta smelt biological opinion's effect on SWP operations, export restrictions could reduce deliveries to MWD by 150 to 200 thousand acre-feet for 2010. DWR estimated that approximately 520,000 AF had been lost to the SWP for 2010 of which nearly 240,000 AF would have been available to MWD. This amount is equivalent to about 16% reduction in SWP supplies, a smaller percentage reduction than MWD's 2007 figure of 22% that was used by IRWD for purposes of this analysis.

Under shortage scenarios, IRWD may need to supplement supplies with production of groundwater, which can exceed the applicable basin production percentage on a short-term basis, providing additional reliability during dry years or emergencies.² In addition, if needed resultant net shortage levels can be addressed by demand reduction programs as described in IRWD's Water Shortage Contingency Plan.

Listed below are Figures provided comparing projected potable water supplies and demands in all of the five year increments, under a temporary MWD allocation scenario:

Figure 1a: Normal Year Supply and Demand (MWD Allocated) – Potable Water
Figure 2a: Single Dry-Year Supply and Demand (MWD Allocated) – Potable Water
Figure 3a: Multiple Dry-Year Supply and Demand (MWD Allocated) – Potable Water

It can be noted that IRWD's above approach is conservative, in that IRWD evaluates the effect of the 16% reduction through 2032 and shows the effect of current allocation scenarios in all of the five-year increments but MWD reports that it has made significant progress in other water resource categories such as transfers, groundwater storage and developing other local resources, and supplies will be available from these resources over the long-term.

Climate Change. The California Department of Water Resources ("DWR") released a report "Progress on Incorporating Climate Change into Management of California's Water Resources" (July 2006), considering the impacts of climate change on the State's water supply. DWR emphasizes that "the report represents an example of an impacts assessment based on four scenarios defining an expected range of potential climate change impacts." DWR's major goal is to extend the analysis for long-term water resource planning from "assessing impacts" to "assessing risk." The report presents directions for further work in incorporating climate change into the management of California's water resources. Emphasis is placed on associating probability estimates with potential climate change scenarios in order to provide policymakers with both ranges of impacts and the likelihoods associated with those impacts. DWR's report acknowledges "that all results presented in this report are preliminary, incorporate several assumptions, reflect a limited number of climate change scenarios, and do not address the likelihood of each scenario. Therefore, these results are not sufficient by themselves to make policy decisions."

In MWD's 2010 IRP Update, MWD recognizes there is a significant uncertainty in the impact of climate change on water supply and changes in weather patterns could significantly affect water supply reliability. MWD plans to hedge against supply and environmental uncertainties by implementing a supply buffer equivalent to 10 percent of total retail demand. This buffer will be implemented through meeting the SB7 water use efficiency goals, implementing aggressive adaptive actions, development of local supplies and transfers.

² In these scenarios, it is anticipated that other water suppliers who produce water from the Orange County Basin will also experience cutbacks of imported supplies and will increase groundwater production and that Orange County Water District (OCWD) imported replenishment water may also be cutback. The OCWD's "2008-2009 Engineer's Report on the groundwater conditions, water supply and basin utilization" references a report which recommends a basin management strategy that provides general guidelines for annual basin refill or storage decrease based on the level of accumulated overdraft. It states, "an accumulated overdraft of 500,000 AF is only acceptable for short durations due to drought conditions...and an optimal basin management target of 100,000 AF of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also providing enough water in storage to offset decreased supplies during a two- to three-year drought." MWD replenishment water is a supplemental source of recharge water and OCWD estimates other main supply sources for recharge are available.

Per MWD's RUWMP, MWD continues to incorporate current climate change science into its planning efforts. As stated in MWD's RUWMP, the 2010 IRP Update supports the MWD Board adopted principles on climate change by: 1) Supporting reasonable, economically viable, and technologically feasible management strategies for reducing impacts on water supply, 2) Supporting flexible "no regret" solutions that provide water supply and quality benefits while increasing the ability to manage future climate change impacts, and 3) Evaluating staff recommendations regarding climate change and water resources against the California Environmental Quality Act to avoid adverse effects on the environment. Potential climate change impacts on state, regional and local water supplies and relevant information for the Orange County hydrologic basin and Santa Ana Watershed have not been sufficiently developed at this time to permit IRWD to assess and quantify the effect of any such impact on its conclusions in the Assessment.

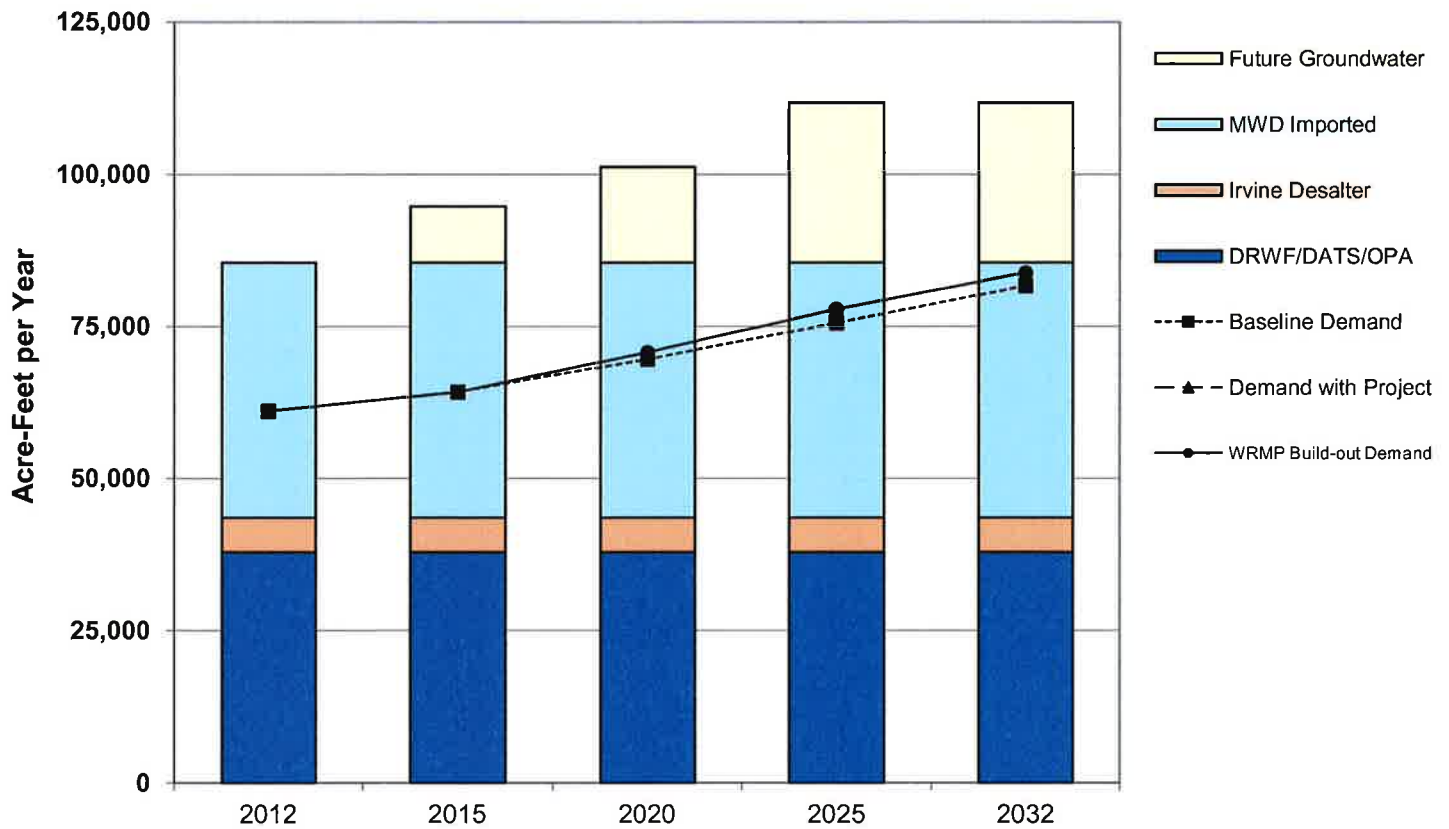
Catastrophic Supply Interruption Planning. MWD has developed Emergency Storage Requirements (2010 RUWMP) to safeguard the region from catastrophic loss of water supply. MWD has made substantial investments in emergency storage and has based its planning on a 100% reduction in its supplies for a period of six months. The emergency plan outlines that under such a catastrophe, non-firm service deliveries would be suspended, and firm supplies would be restricted by a mandatory cutback of 25 percent from normal year demand deliveries. In addition, MWD discusses the long term Delta plan in its 2010 RUWMP (pages 3-18 to 3-21). IRWD has also addressed supply interruption planning in its WRMP and UWMP.

Detailed Assessment

1. Supply and demand comparison

Comparisons of IRWD's average annual and peak (maximum day) demands and supplies, under *baseline* (existing and committed demand, without the Project), *with-project* (baseline plus Project), and *full build-out* development projections, are shown in the following Figures 1-4 (potable water), Figures 5-8 (nonpotable water) and Figures 1a, 2a, and 3a (short term MWD allocation potable water). See also the "Recent Actions on Delta Pumping" above.

Figure 1
IRWD Normal-Year Supply & Demand - Potable Water

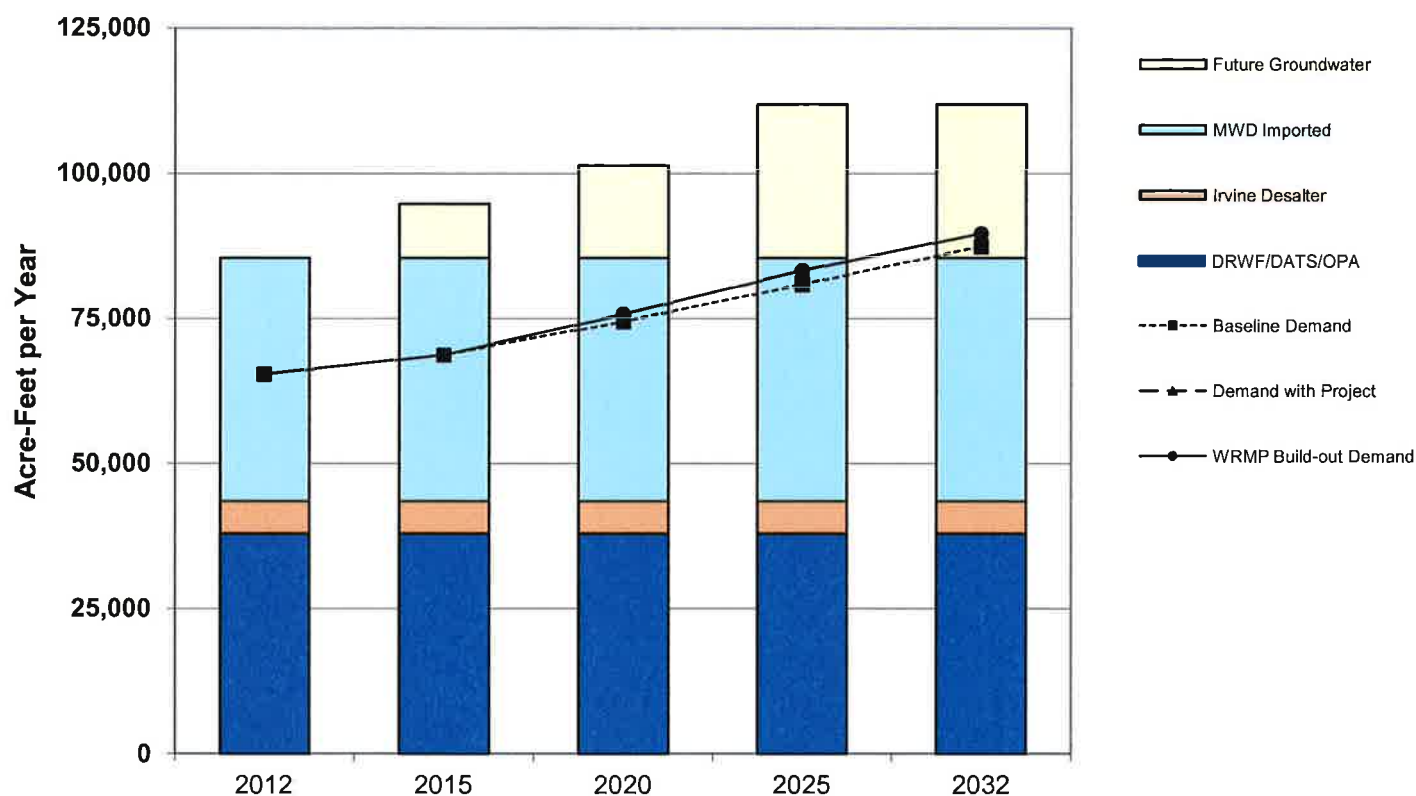


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	85,469	101,069	107,569	118,069	118,069
Baseline Demand	60,992	64,220	69,563	75,505	81,667
Demand with Project	60,988	64,182	70,713	77,759	83,807
WRMP Build-out Demand	60,988	64,182	70,713	77,759	83,807
Reserve Supply with Project	24,481	36,888	36,856	40,310	34,262

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 2
IRWD Single Dry-Year Supply & Demand - Potable Water

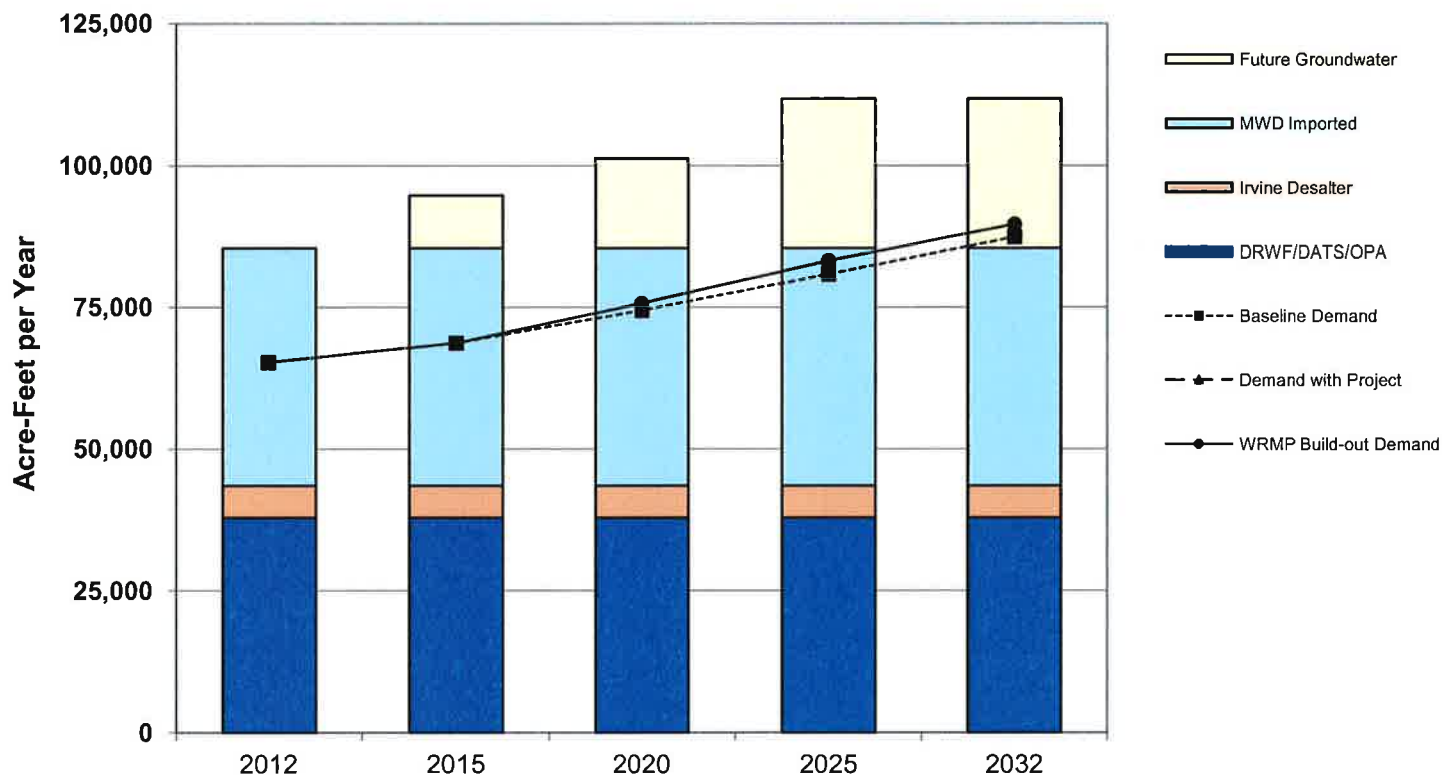


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	85,469	101,069	107,569	118,069	118,069
Baseline Demand	65,262	68,716	74,432	80,791	87,384
Demand with Project	65,257	68,674	75,663	83,202	89,674
WRMP Build-out Demand	65,257	68,674	75,663	83,202	89,674
Reserve Supply with Project	20,212	32,395	31,907	34,867	28,395

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 3
IRWD Multiple Dry-Year Supply & Demand - Potable Water

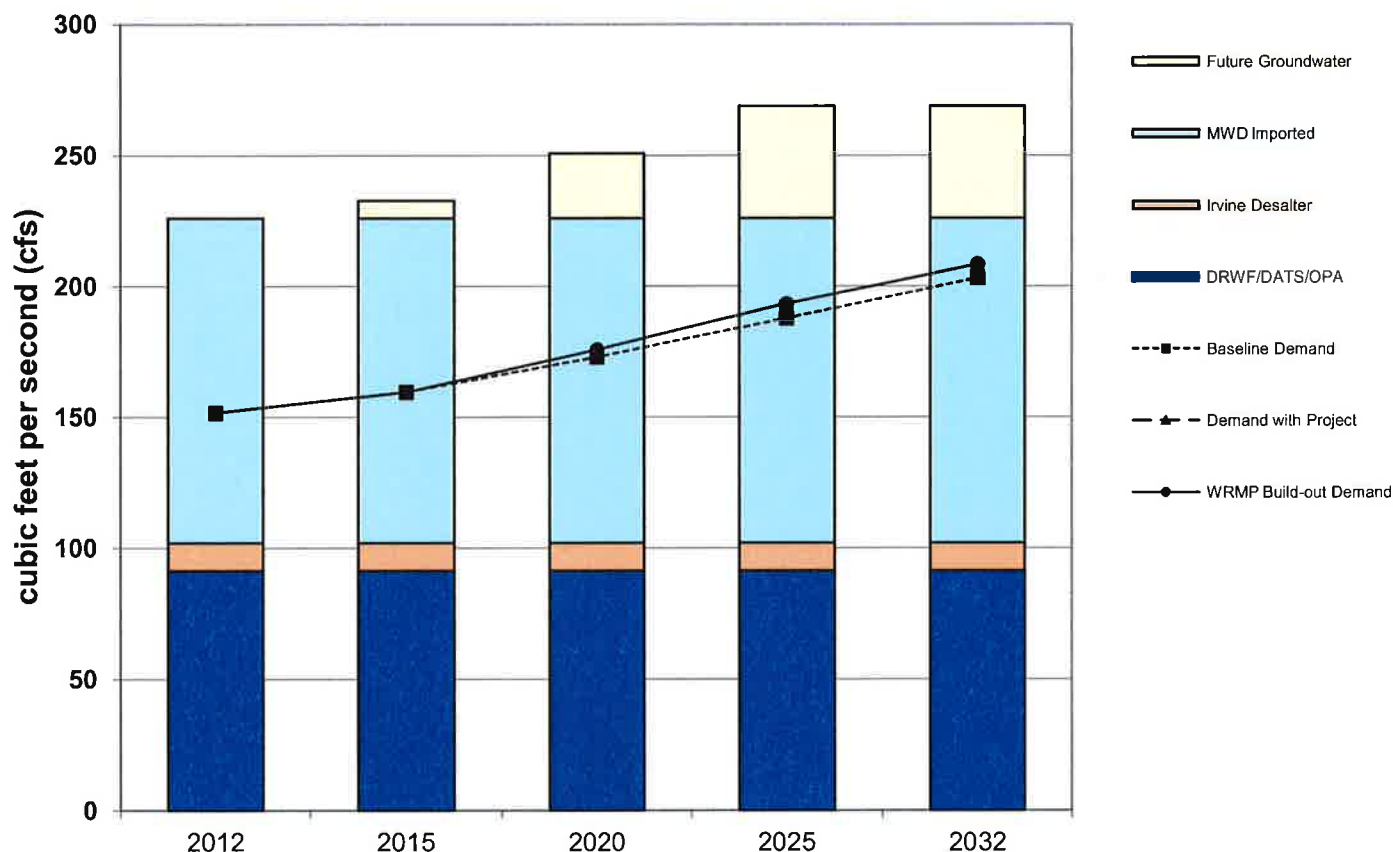


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	41,929	41,929	41,929	41,929	41,929
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	85,469	101,069	107,569	118,069	118,069
Baseline Demand	65,262	68,716	74,432	80,791	87,384
Demand with Project	65,257	68,674	75,663	83,202	89,674
WRMP Build-out Demand	65,257	68,674	75,663	83,202	89,674
Reserve Supply with Project	20,212	32,395	31,907	34,867	28,395

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

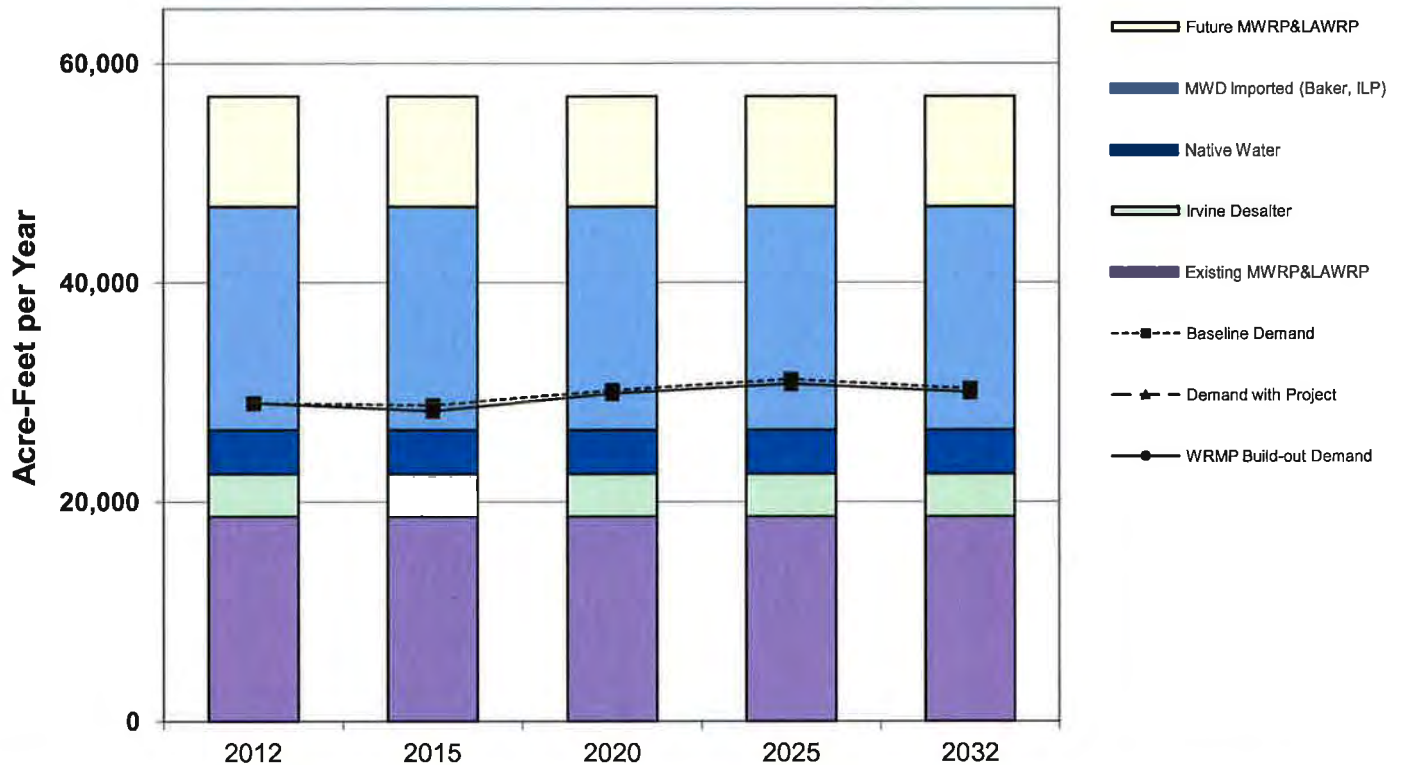
MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 4
IRWD Maximum-Day Supply & Demand - Potable Water



(in cfs)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	124.1	124.1	124.1	124.1	124.1
DRWF/DATS/OPA	91.4	91.4	91.4	91.4	91.4
Irvine Desalter	10.6	10.6	10.6	10.6	10.6
Wells 21 & 22	-	6.0	6.0	6.0	6.0
Supplies Under Development					
Future Groundwater	-	6.7	24.7	42.7	42.7
Maximum Supply Capability	226.1	238.8	256.8	274.8	274.8
Baseline Demand	151.6	159.7	172.9	187.7	203.0
Demand with Project	151.6	159.6	175.8	193.3	208.4
WRMP Build-out Demand	151.6	159.6	175.8	193.3	208.4
Reserve Supply with Project	74.5	79.3	81.0	81.5	66.5

Figure 5
IRWD Normal-Year Supply & Demand - Nonpotable Water

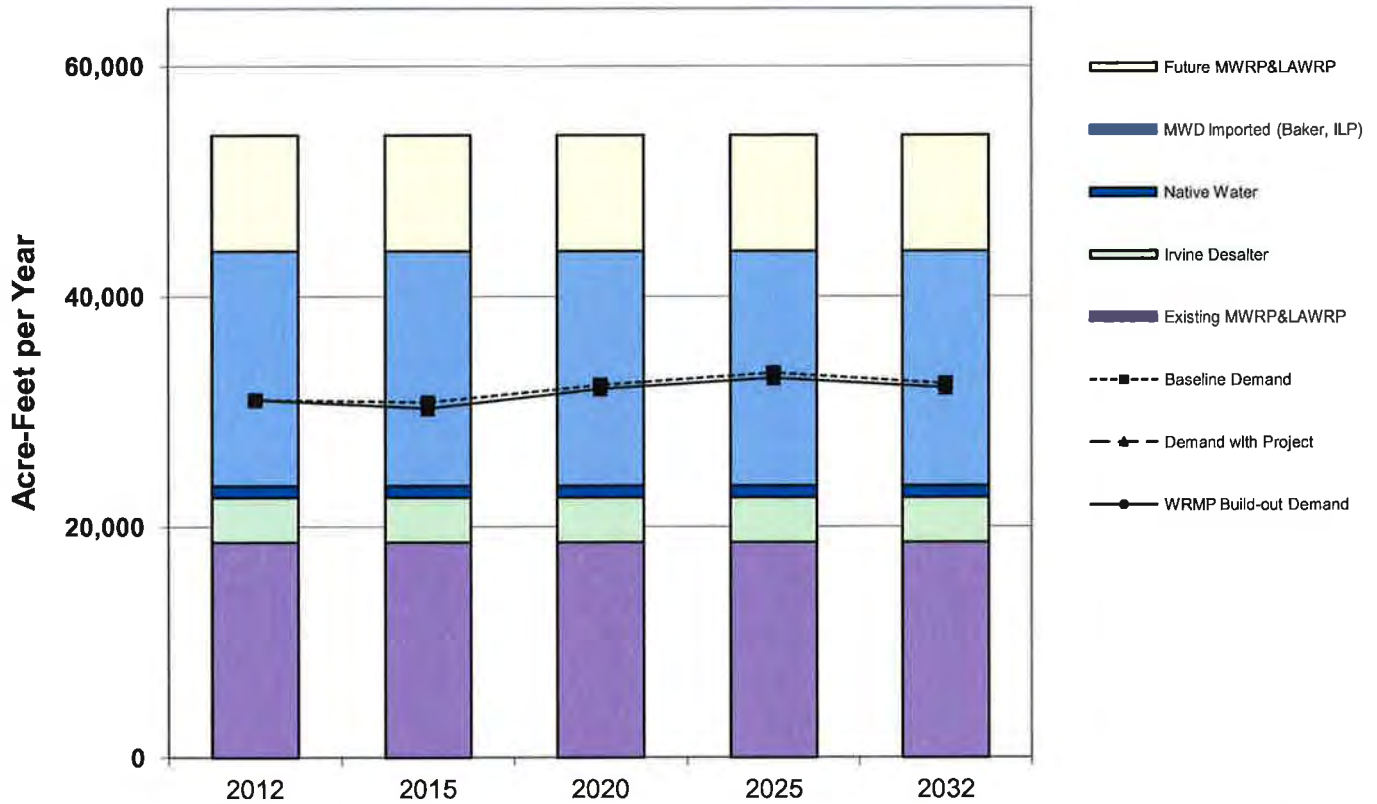


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	4,000	4,000	4,000	4,000	4,000
Supplies Under Development					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	57,035	57,035	57,035	57,035	57,035
Baseline Demand	28,985	28,779	30,169	31,157	30,296
Demand with Project	28,985	28,281	29,856	30,757	29,972
WRMP Build-out Demand	28,985	28,281	29,856	30,757	29,972
Reserve Supply with Project	28,050	28,050	28,754	27,179	27,063

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 6
IRWD Single Dry-Year Supply & Demand - Nonpotable Water

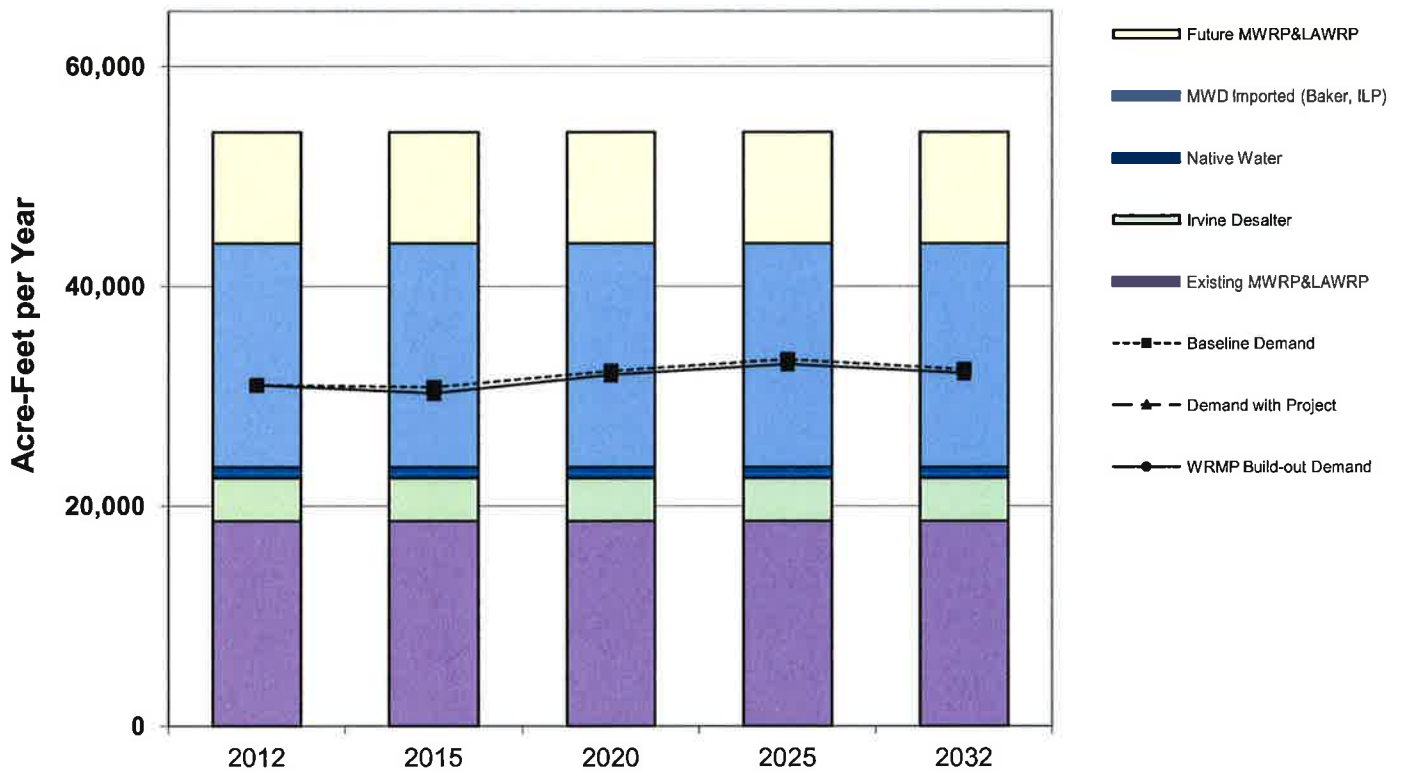


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	54,035	54,035	54,035	54,035	54,035
Baseline Demand	31,014	30,794	32,281	33,338	32,417
Demand with Project	31,014	30,261	31,946	32,910	32,070
WRMP Build-out Demand	31,014	30,261	31,946	32,910	32,070
Reserve Supply with Project	23,021	23,774	22,089	21,125	21,965

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

Figure 7
IRWD Multiple Dry-Year Supply & Demand - Nonpotable Water

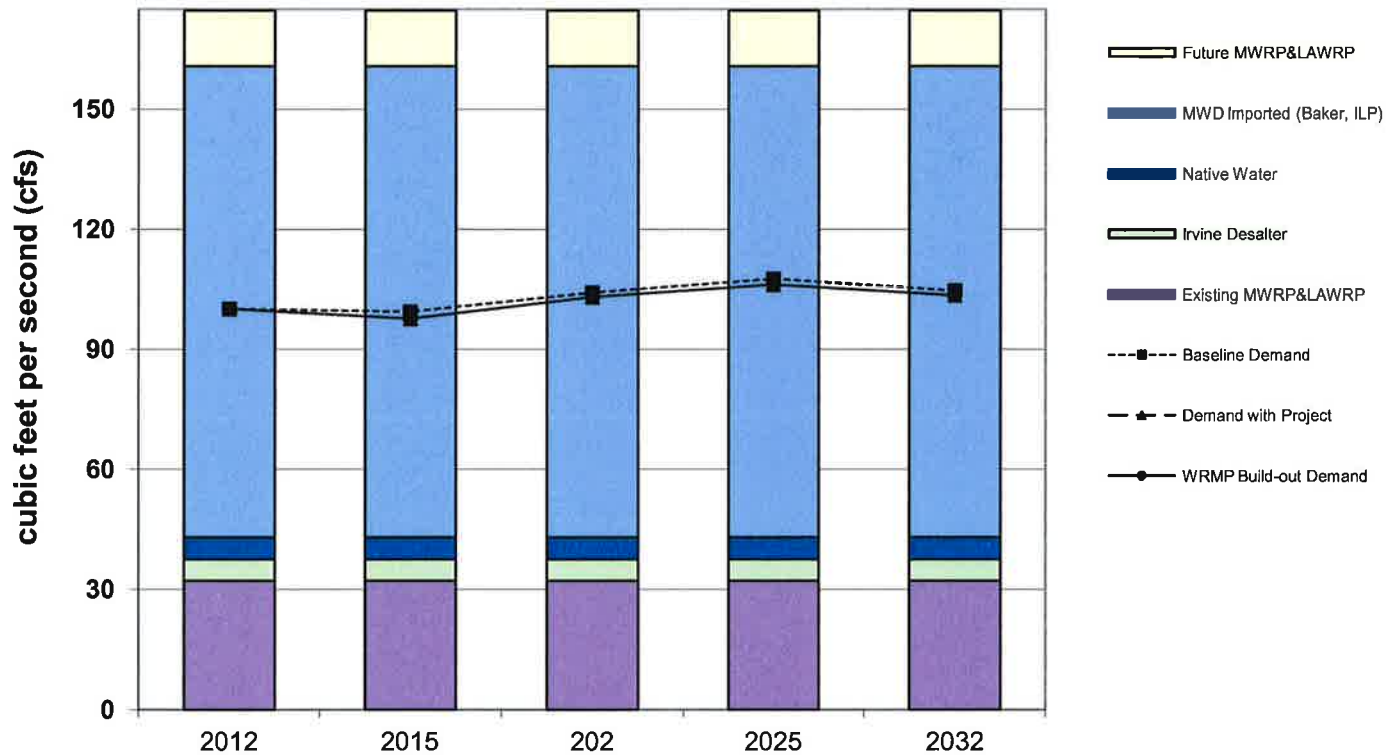


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	18,657	18,657	18,657	18,657	18,657
MWD Imported (Baker, ILP)	20,380	20,380	20,380	20,380	20,380
Irvine Desalter	3,898	3,898	3,898	3,898	3,898
Native Water	1,000	1,000	1,000	1,000	1,000
Supplies Under Development					
Future MWRP&LAWRP	10,100	10,100	10,100	10,100	10,100
Maximum Supply Capability	54,035	54,035	54,035	54,035	54,035
Baseline Demand	31,014	30,794	32,281	33,338	32,417
Demand with Project	31,014	30,261	31,946	32,910	32,070
WRMP Build-out Demand	31,014	30,261	31,946	32,910	32,070
Reserve Supply with Project	23,021	23,774	22,089	21,125	21,965

Note: Downward trend reflects reduction in agricultural use over time.

MWD Imported Supplies are shown at 16% reduction off of average connected capacity.

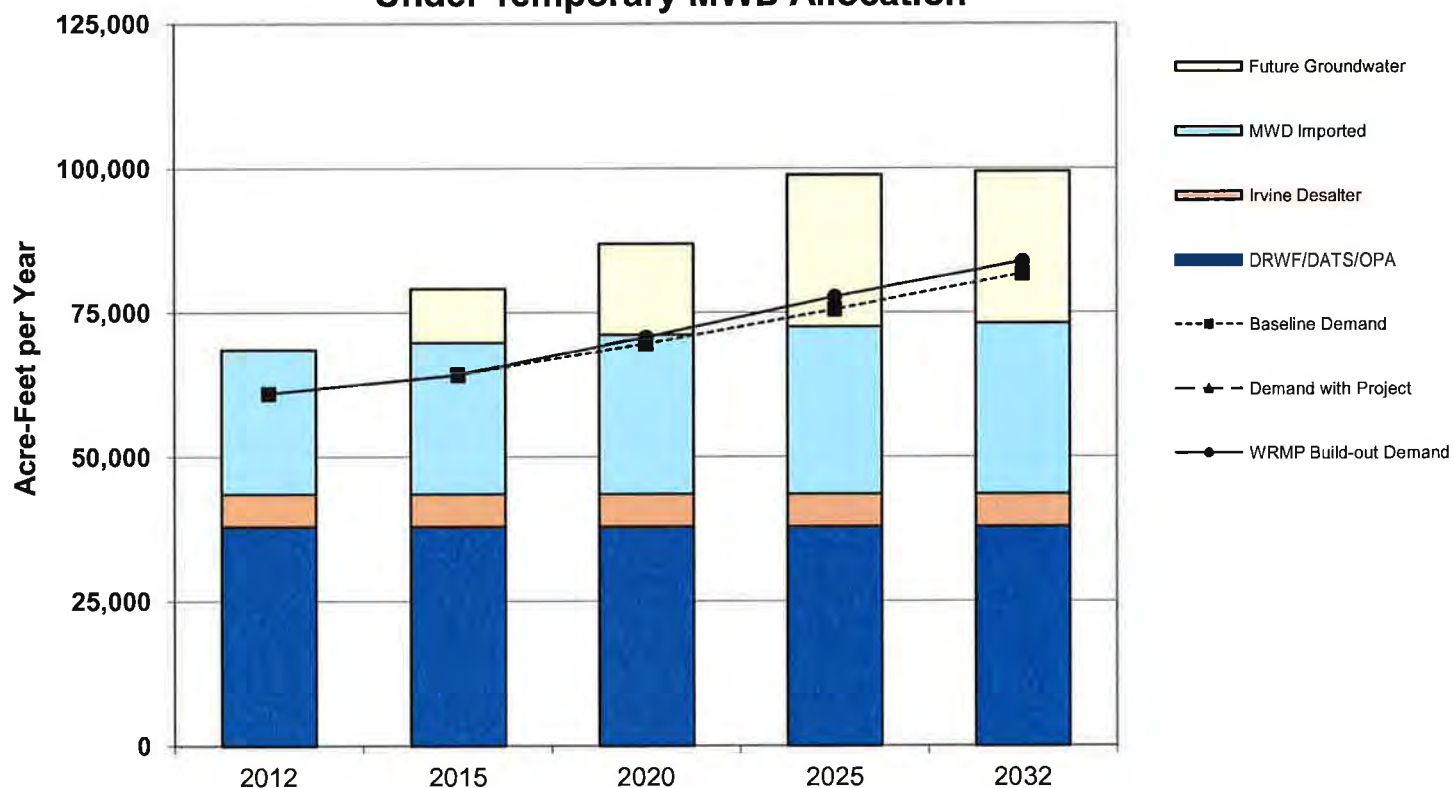
Figure 8
IRWD Maximum-Dry Supply & Demand - Nonpotable Water



(in cfs)	2012	2015	2022	2025	2032
Current Nonpotable Supplies					
Existing MWRP&LAWRP	32.2	32.2	32.2	32.2	32.2
Irvine Desalter	5.4	5.4	5.4	5.4	5.4
Native Water	5.5	5.5	5.5	5.5	5.5
MWD Imported (Baker, ILP)	117.7	117.7	117.7	117.7	117.7
Supplies Under Development					
Future MWRP&LAWRP	14.0	14.0	14.0	14.0	14.0
Maximum Supply Capability	174.7	174.7	174.7	174.7	174.7
Baseline Demand	100.1	99.4	104.2	107.6	104.6
Demand with Project	100.1	97.7	103.1	106.2	103.5
WRMP Build-out Demand	100.1	97.7	103.1	106.2	103.5
Reserve Supply with Project	74.6	77.1	71.6	68.5	71.2

Note: Downward trend reflects reduction in agricultural use over time.

Figure 1a
IRWD Normal-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation*

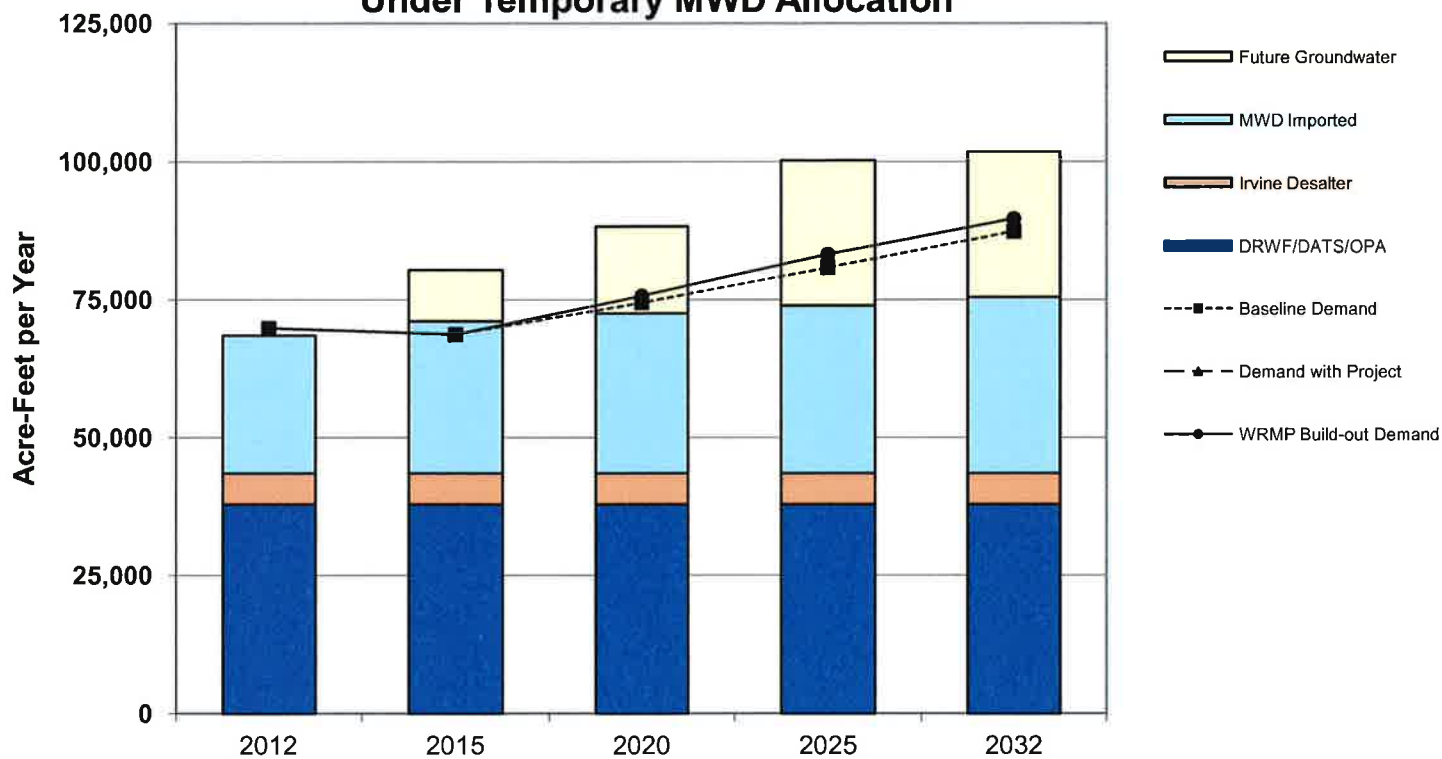


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	25,000	26,275	27,616	29,024	29,608
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	68,540	85,415	93,256	105,164	105,748
Baseline Demand	60,992	64,220	69,563	75,505	81,667
Demand with Project	60,988	64,182	70,713	77,759	83,807
WRMP Build-out Demand	60,988	64,182	70,713	77,759	83,807
Reserve Supply with Project	7,552	21,234	22,543	27,405	21,940

Notes: By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

Figure 2a
IRWD Single Dry-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation*

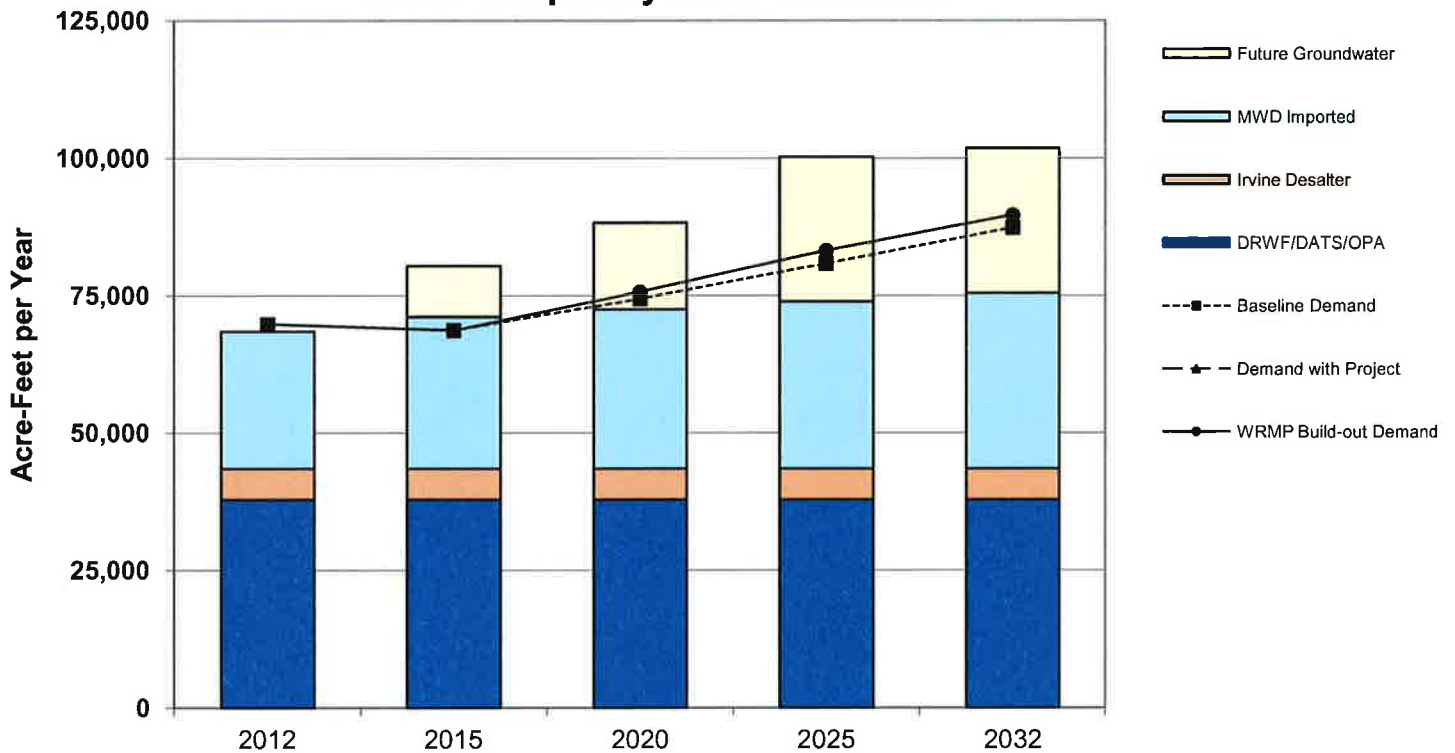


(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	25,000	27,589	28,968	30,417	31,938
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Wells 21 & 22	-	6,300	6,300	6,300	6,300
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	68,540	86,729	94,608	106,557	108,078
Baseline Demand	69,830	68,716	74,432	80,791	87,384
Demand with Project	69,825	68,674	75,663	83,202	89,674
WRMP Build-out Demand	69,825	68,674	75,663	83,202	89,674
Reserve Supply with Project	(1,285)	18,055	18,946	23,355	18,404

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

Figure 3a
IRWD Multiple Dry-Year Supply & Demand - Potable Water
Under Temporary MWD Allocation*



(in acre-feet per year)	2012	2015	2020	2025	2032
Current Potable Supplies					
MWD Imported (EOCF#2, AMP, OCF)	25,000	27,589	28,968	30,417	31,938
DRWF/DATS/OPA	37,900	37,900	37,900	37,900	37,900
Irvine Desalter	5,640	5,640	5,640	5,640	5,640
Supplies Under Development					
Future Groundwater	-	9,300	15,800	26,300	26,300
Maximum Supply Capability	68,540	80,429	88,308	100,257	101,778
Baseline Demand	69,830	68,716	74,432	80,791	87,384
Demand with Project	69,825	68,674	75,663	83,202	89,674
WRMP Build-out Demand	69,825	68,674	75,663	83,202	89,674
Reserve Supply with Project	(1,285)	11,755	12,646	17,055	12,104

Notes: Supplies identical to Normal-Year based on Metropolitan's Regional Urban Water Management Plan (11/8/05) and usage of groundwater under drought conditions (OCWD Master Plan). Demands increased 7% from Normal-Year. By agreement, IRWD is required to count the production from the Irvine Subbasin in calculating available supplies for TIC developments (see Potable Supply-Groundwater).

*For illustration purposes, IRWD has shown MWD Imported Supplies as estimated under a short-term 10% allocation, Shortage Stage 2 in all of the 5-year increments. However, it is likely that such a scenario would only be temporary. Under a MWD Allocation, IRWD could supplement supplies with groundwater production which can exceed applicable basin percentages on a short-term basis. IRWD may also reduce demands by implementing shortage contingency measures as described in the UWMP.

2. Information concerning supplies

(a)(1) Existing sources of identified water supply for the proposed project: IRWD does not allocate particular supplies to any project, but identifies total supplies for its service area, as shown in the following table:

	Max Day (cfs)	Avg. Annual (AFY)	Annual by Category (AFY)
Current Supplies			
Potable - Imported			
East Orange County Feeder No. 2	41.4	16,652	1
Allen-McColloch Pipeline*	64.7	26,024	1
Orange County Feeder	18.0	7,240	1
			49,916
Potable - Groundwater			
Dyer Road Wellfield	80.0	28,000	2
OPA Well	1.4	1,000	
Deep Aquifer Treatment System-DATS	10.0	8,900	2
Wells 21 & 22	6.0	6,300	2
Irvine Desalter	10.6	5,640	3
Total Potable Current Supplies	232.1		99,756
Nonpotable - Reclaimed Water			
MWRP (18 mgd)	23.9	17,340	4
LAWRP (5.5 mgd)	8.3	5,975	4
			23,315
Nonpotable - Imported			
Baker Aqueduct	52.7	15,262	5
Irvine Lake Pipeline	65.0	9,000	6
			24,262
Nonpotable - Groundwater			
Irvine Desalter-Nonpotable	5.4	3,898	7
			3,898
Nonpotable Native			
Irvine Lake	5.5	4,000	8
			4,000
Total Nonpotable Current Supplies	160.8		55,475
Total Combined Current Supplies	392.9		155,231
Supplies Under Development			
Potable Supplies			
Well 106	2.2	1,300	
Well 53	4.5	3,000	
Future OPA Wells	8.0	5,000	
Anaheim wellfield	10.0	6,500	
Wells 51 & 52	9.0	5,500	
Tustin Legacy wells	9.0	5,000	9
Total Potable Under Development Supplies	42.7	26,300	26,300
Nonpotable Supplies: Future MWRP&LAWRP Reclaimed	20.0	14,450	10
Total Under Development	105.4		40,750
Total Supplies			
Potable Supplies	274.8		126,056
Nonpotable Supplies	180.7		69,925
Total Supplies (Current and Under Development)	455.6		195,981

1 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 1.8 (see Footnote 3, page 22).

2 Contract amount - See Potable Supply-Groundwater(iii).

3 Contract amount - See Potable Supply-Groundwater (iv) and (v). Maximum day well capacity is compatible with contract amount.

4 MWRP 18.0 mgd treatment capacity (17,400 AFY RW production) and LAWRP 5.5 mgd tertiary treatment capacity (5,975 AFY)

5 Based on converting maximum day capacity to average by dividing the capacity by a peaking factor of 2.5 (see Footnote 3, page 22).

6 Based on IRWD's proportion of Irvine Lake imported water storage; Actual ILP capacity would allow the use of additional imported water from MWD through the Santiago Lateral.

7 Contract amount - See Nonpotable Supply-Groundwater (i) and (ii). Maximum day well capacity (cfs) is compatible with contract amount.

8 Based on 70 years historical average of Santiago Creek Inflow into Irvine Lake.

9 Estimated combined capacity of wells.

10 Future estimated MWRP & LAWRP reclaimed water production.

*64.7 cfs is current assigned capacity; based on increased peak flow, IRWD can purchase 10 cfs more (see page 23 (b)(1)(iii))

(2) Quantities received in prior years from existing sources identified in (a)(1):

Source	1980	1985	1990	1995	2000	2005	2010
Potable - imported	29,510	43,320	44,401	28,397	36,777	19,306	19,306
Potable - groundwater	827	38	10,215	20,020	20,919	37,160	37,160
Nonpotable - reclaimed	9,196	12,399	11,589	10,518	14,630	15,296	15,296
Nonpotable - groundwater	-	36	816	1,834	2,890	2,285	2,285
Nonpotable - native	11,909	3,587	2,778	5,980	4,949	7,251	7,251
Total	60,998	71,639	94,699	69,082	96,508	86,602	86,602

*Includes water purchased for delivery to storage in Irvine Lake.

(Source: water purchase and production records.)

(b) Required information concerning currently available and under-development water supply entitlements, water rights and water service contracts:

(1) Written contracts or other proof of entitlement.^{3 4}

•POTABLE SUPPLY - IMPORTED⁵

Potable imported water service connections (currently available).

(i) Potable imported water is delivered to IRWD at various service connections to the imported water delivery system of The Metropolitan Water District of Southern California ("MWD"): service connections CM-01A and OC-7 (Orange County Feeder); CM-10, CM-12, OC-38, OC-39, OC-57, OC-58, OC-63 (East Orange County Feeder No. 2); and OC-68, OC-71, OC-72, OC-73/73A, OC-74, OC-75, OC-83, OC-84, OC-87 (Allen-McColloch Pipeline). IRWD's entitlements regarding service from the MWD delivery system facilities are described in the following paragraphs and summarized in the above Table ((2)(a)(1)). IRWD receives imported water service through Municipal Water District of Orange County ("MWDOC"), a member agency of MWD.

Allen-McColloch Pipeline ("AMP") (currently available).

(ii) Agreement For Sale and Purchase of Allen-McColloch Pipeline, dated as of July 1, 1994 (Metropolitan Water District Agreement No. 4623) ("AMP Sale Agreement"). Under the AMP Sale Agreement, MWD purchased the Allen-McColloch Pipeline (formerly known as the "Diemer Intertie") from MWDOC, the MWDOC Water Facilities Corporation and certain agencies, including IRWD and Los Alisos Water District ("LAWD"),⁶ identified as "Participants" therein. Section 5.02 of the AMP Sale Agreement obligates MWD to meet IRWD's and the other Participants' requests for deliveries and specified minimum hydraulic grade lines at each connection serving a Participant, subject to availability of water. MWD

³ In some instances, the contractual and other legal entitlements referred to in the following descriptions are stated in terms of flow capacities, in cubic feet per second ("cfs"). In such instances, the cfs flows are converted to volumes of AFY for purposes of analyzing supply sufficiency in this assessment, by dividing the capacity by a peaking factor of 1.8 (potable) or 2.5 (nonpotable), consistent with maximum day peaking factors used in the WRMP. The resulting reduction in assumed available annual AFY volumes through the application of these factors recognizes that connected capacity is provided to meet peak demands and that seasonal variation in demand and limitations in local storage prevent these capacities from being utilized at peak capacity on a year-round basis. However, the application of these factors produces a conservatively low estimate of annual AFY volumes from these connections; additional volumes of water are expected to be available from these sources.

⁴ In the following discussion, contractual and other legal entitlements are characterized as either potable or nonpotable, according to the characterization of the source of supply. Some of the nonpotable supplies surplus to nonpotable demand could potentially be rendered potable by the addition of treatment facilities; however, except where otherwise noted, IRWD has no current plans to do so.

⁵ See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

⁶ IRWD has succeeded to LAWD's interests in the AMP and other LAWD water supply facilities and rights mentioned in this assessment, by virtue of the consolidation of IRWD and LAWD on December 31, 2000.

agrees to operate the AMP as any other MWD pipeline. MWD has the right to operate the AMP on a “utility basis,” meaning that MWD need not observe capacity allocations of the Participants but may use available capacity to meet demand at any service connection.

The AMP Sale Agreement obligates MWD to monitor and project AMP demands and to construct specified pump facilities or make other provision for augmenting MWD’s capacity along the AMP, at MWD’s expense, should that be necessary to meet demands of all of the Participants (Section 5.08).

(iii) Agreement For Allocation of Proceeds of Sale of Allen-McColloch Pipeline, dated as of July 1, 1994 (“AMP Allocation Agreement”). This agreement, entered into concurrently with the AMP Sale Agreement, provided each Participant, including IRWD, with a capacity allocation in the AMP, for the purpose of allocating the sale proceeds among the Participants in accordance with their prior contractual capacities adjusted to conform to their respective future demands. IRWD’s capacity under the AMP Allocation Agreement (including its capacity as legal successor agency to LAWD) is 64.69 cfs at IRWD’s first four AMP connections, 49.69 cfs at IRWD’s next five downstream AMP connections and 35.01 and 10.00 cfs, respectively at IRWD’s remaining two downstream connections. The AMP Allocation Agreement further provides that if a Participant’s peak flow exceeds its capacity, the Participant shall “purchase” additional capacity from the other Participants who are using less than their capacity, until such time as MWD augments the capacity of the AMP. The foregoing notwithstanding, as mentioned in the preceding paragraph, the allocated capacities do not alter MWD’s obligation under the AMP Sale Agreement to meet all Participants’ demands along the AMP, and to augment the capacity of the AMP if necessary. Accordingly, under these agreements, IRWD can legally increase its use of the AMP beyond the above-stated capacities, but would be required to reimburse other Participants from a portion of the proceeds IRWD received from the sale of the AMP.

(iv) Improvement Subleases (or “FAP” Subleases) [MWDOC and LAWD; MWDOC and IRWD], dated August 1, 1989; 1996 Amended and Restated Allen-McColloch Pipeline Subleases [MWDOC and LAWD; MWDOC and IRWD], dated March 1, 1996. IRWD subleases its AMP capacity, including the capacity it acquired as successor to LAWD. To facilitate bond financing for the construction of the AMP, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership of the pipeline, and the Participants would be sublessees. As is the case with the AMP Sale Agreement, the subleases similarly provide that water is subject to availability.

East Orange County Feeder No. 2 (“EOCF#2”) (currently available).

(v) Agreement For Joint Exercise of Powers For Construction, Operation and Maintenance of East Orange County Feeder No. 2, dated July 11, 1961, as amended on July 25, 1962 and April 26, 1965; Agreement Re Capacity Rights In Proposed Water Line, dated September 11, 1961 (“IRWD MWDOC Assignment Agreement”); Agreement Regarding Capacity Rights In the East Orange County Feeder No. 2, dated August 28, 2000 (“IRWD Coastal Assignment Agreement”). East Orange County Feeder No. 2 (“EOCF#2”), a feeder linking Orange County

with MWD's feeder system, was constructed pursuant to a joint powers agreement among MWDOC (then called Orange County Municipal Water District), MWD, Coastal Municipal Water District ("Coastal"), Anaheim and Santa Ana. A portion of IRWD's territory is within MWDOC and the remainder is within the former Coastal (which was consolidated with MWDOC in 2001). Under the IRWD MWDOC Assignment Agreement, MWDOC assigned 41 cfs of capacity to IRWD in the reaches of EOCF#2 upstream of the point known as Coastal Junction (reaches 1 through 3), and 27 cfs in reach 4, downstream of Coastal Junction. Similarly, under the IRWD Coastal Assignment Agreement, prior to Coastal's consolidation with MWDOC, Coastal assigned to IRWD 0.4 cfs of capacity in reaches 1 through 3 and 0.6 cfs in reach 4 of EOCF#2. Delivery of water through EOCF#2 is subject to the rules and regulations of MWD and MWDOC, and is further subject to application and agreement of IRWD respecting turnouts.

Orange County Feeder (currently available)

(vi) Agreement, dated March 13, 1956. This 1956 Agreement between MWDOC's predecessor district and the Santa Ana Heights Water Company ("SAHWC") provides for delivery of MWD imported supply to the former SAHWC service area. SAHWC's interests were acquired on behalf of IRWD through a stock purchase and IRWD annexation of the SAHWC service area in 1997. The supply is delivered through a connection to MWD's Orange County Feeder designated as OC-7.

(vii) Agreement For Transfer of Interest In Pacific Coast Highway Water Transmission and Storage Facilities From The Irvine Company To the Irvine Ranch Water District, dated April 23, 1984; Joint Powers Agreement For the Construction, Operation and Maintenance of Sections 1a, 1b and 2 of the Coast Supply Line, dated June 9, 1989; Agreement, dated January 13, 1955 ("1955 Agreement"). The jointly constructed facility known as the Coast Supply Line ("CSL"), extending southward from a connection with MWD's Orange County Feeder at Fernleaf Street in Newport Beach, was originally constructed pursuant to a 1952 agreement among Laguna Beach County Water District ("LBCWD"), The Irvine Company (TIC) and South Coast County Water District. Portions were later reconstructed. Under the above-referenced transfer agreement in 1984, IRWD succeeded to TIC's interests in the CSL. The CSL is presently operated under the above-referenced 1989 joint powers agreement, which reflects IRWD's ownership of 10 cfs of capacity. The 1989 agreement obligates LBCWD, as the managing agent and trustee for the CSL, to purchase water and deliver it into the CSL for IRWD. LBCWD purchases such supply, delivered by MWD to the Fernleaf connection, pursuant to the 1955 Agreement with Coastal (now MWDOC).

•POTABLE SUPPLY - GROUNDWATER

(i) Orange County Water District Act, Water Code App., Ch. 40 ("Act"). IRWD is an operator of groundwater-producing facilities in the Orange County Groundwater Basin (the "Basin"). Although the rights of the producers within the Basin vis a vis one another have not been adjudicated, they nevertheless exist and have not been abrogated by the Act (§40-77). The rights consist of

municipal appropriators' rights and may include overlying and riparian rights. The Basin is managed by OCWD under the Act, which functions as a statutorily-imposed physical solution. The Act empowers OCWD to impose replenishment assessments and basin equity assessments on production and to require registration of water-producing facilities and the filing of certain reports; however, OCWD is expressly prohibited from limiting extraction unless a producer agrees (§ 40-2(6) (c)) and from impairing vested rights to the use of water (§ 40-77). Thus, producers may install and operate production facilities under the Act; OCWD approval is not required. OCWD is required to annually investigate the condition of the Basin, assess overdraft and accumulated overdraft, and determine the amount of water necessary for replenishment (§40-26). OCWD has studied the Basin replenishment needs and potential projects to address growth in demand until 2020. This is described in detail in the OCWD Master Plan Report, dated April, 1999. OCWD's analysis has been expanded and updated through 2025 in its Final Draft Long-Term Facilities Plan (January, 2006).

(ii) *Irvine Ranch Water District v. Orange County Water District*, OCSC No. 795827. A portion of IRWD is outside the jurisdictional boundary of OCWD. IRWD is eligible to annex the Santa Ana River Watershed portion of this territory to OCWD, under OCWD's current annexation policy (Resolution No. 86-2-15, adopted on February 19, 1986 and reaffirmed on June 2, 1999), and anticipates doing so. However, this September 29, 1998, Superior Court ruling indicates that IRWD is entitled to deliver groundwater from the Basin to the IRWD service area irrespective of whether such area is also within OCWD.

Dyer Road Wellfield (DRWF) / Deep Aquifer Treatment System (DATS)
(currently available)

(iii) Agreement For Water Production and Transmission Facilities, dated March 18, 1981, as amended May 2, 1984, September 19, 1990 and November 3, 1999 (the "DRWF Agreement"). The DRWF Agreement, among IRWD, OCWD and Santa Ana, concerns the development of IRWD's Dyer Road Wellfield ("DRWF"), within the Basin. The DRWF consists of 16 wells pumping from the non-colored water zone of the Basin and 2 wells (with colored-water treatment facilities) pumping from the deep, colored-water zone of the Basin (the colored-water portion of the DRWF is sometimes referred to as the Deep Aquifer Treatment System or "DATS".) Under the DRWF Agreement, an "equivalent" basin production percentage (BPP) has been established for the DRWF, currently 28,000 AFY of non-colored water and 8,000 AFY of colored water, provided any amount of the latter 8,000 AFY not produced results in a matching reduction of the 28,000 AFY BPP. Although typically IRWD production from the DRWF does not materially exceed the equivalent BPP, the equivalent BPP is not an extraction limitation; it results in imposition of monetary assessments on the excess production. The DRWF Agreement also establishes monthly pumping amounts for the DRWF. With the addition of the Concentrated Treatment System (CATS), IRWD has increased the yield of DATS.

Irvine Subbasin / Irvine Desalter (currently available)

(iv) First Amended and Restated Agreement, dated March 11, 2002, as

amended June 15, 2006, restating May 5, 1988 agreement (“Irvine Subbasin Agreement”). TIC has historically pumped agricultural water from the Irvine Subbasin. (As in the rest of the Basin of which this subbasin is a part, the groundwater rights have not been adjudicated, and OCWD provides governance and management under the Act.) The 1988 agreement between IRWD and TIC provided for the joint use and management of the Irvine Subbasin. The 1988 agreement further provided that the 13,000 AFY annual yield of the Irvine Subbasin would be allocated 1,000 AFY to IRWD and 12,000 AFY to TIC. Under the restated Irvine Subbasin Agreement, the foregoing allocations were superseded as a result of TIC’s commencement of the building its Northern Sphere Area project, with the effect that the Subbasin production capability, wells and other facilities, and associated rights have been transferred from TIC to IRWD, and IRWD has assumed the production from the Subbasin. In consideration of the transfer, IRWD is required to count the supplies attributable to the transferred Subbasin production in calculating available supplies for the Northern Sphere Area project and other TIC development and has agreed that they will not be counted toward non-TIC development.

A portion of the existing Subbasin water production facilities produce water which is of potable quality. IRWD could treat some of the water produced from the Subbasin for potable use, by means of the Desalter and other projects. Although, as noted above, the Subbasin has not been adjudicated and is managed by OCWD, TIC reserved water rights from conveyances of its lands as development over the Subbasin has occurred, and under the Irvine Subbasin Agreement TIC has transferred its rights to IRWD.

(v) Second Amended and Restated Agreement Between Orange County Water District and Irvine Ranch Water District Regarding the Irvine Desalter Project, dated June 11, 2001, and other agreements referenced therein. This agreement provides for the extraction and treatment of subpotable groundwater from the Irvine Subbasin, a portion of the Basin. As is the case with the remainder of the Basin, IRWD’s entitlement to extract this water is not adjudicated, but the use of the entitlement is governed by the OCWD Act. (See also, discussion of Irvine Subbasin in the preceding paragraph.) A portion of the product water has been delivered into the IRWD potable system, and the remainder has been delivered into the IRWD nonpotable system.

Orange Park Acres (currently available)

On June 1, 2008, through annexation and merger, IRWD acquired the water system of the former Orange Park Acres Mutual Water company, including well [OPA Well]. The well is operated within the Orange County Groundwater Basin.

Wells 21 and 22 (currently available)

IRWD is completing construction of treatment facilities, pipelines and wellhead facilities for Wells 21 and 22. Water supplied through this project will be available by the end of 2012. The wells will be operated within the Orange County Groundwater Basin.

Irvine Wells (under development)

(vi) IRWD is pursuing the installation of production facilities in the west Irvine, Anaheim, Tustin Legacy and Tustin Ranch portions of the Basin. These groundwater supplies are considered to be under development; however, four wells have been drilled and have previously produced groundwater, three wells have been drilled but have not been used as production wells to date, a site for an additional well and treatment facility has been acquired by IRWD. The production facilities can be constructed and operated under the Act; no statutory or contractual approval is required to do so. An agreement with the City of Anaheim would be developed for production within Anaheim. Appropriate environmental review would be conducted for each facility. See discussion of the Act under Potable Supply - Groundwater, paragraph (i), above.

•NONPOTABLE SUPPLY - RECLAIMED

Water Reclamation Plants (currently available)

Water Code Section 1210. IRWD supplies its own reclaimed water from wastewater collected by IRWD and delivered to IRWD's Michelson Water Reclamation Plant (MWRP) and Los Alisos Water Reclamation Plant (LAWRP). MWRP currently has a permitted capacity of 18 million gallons per day (MGD) and LAWRP currently has a permitted capacity of 5.5 MGD. Water Code Section 1210 provides that the owner of a wastewater treatment plant operated for the purposes of treating wastes from a sanitary sewer system holds the exclusive right to the treated effluent as against anyone who has supplied the water discharged into the sewer system. IRWD's permits for the operation of MWRP and LAWRP allow only irrigation and other customer uses of reclaimed water, and do not permit stream discharge of reclaimed water; thus, no issue of downstream appropriation arises, and IRWD is entitled to deliver all of the effluent to meet contractual and customer demands.

Water Reclamation Plant Expansion (under development)

IRWD has prepared a Final Environmental Impact Report for the Michelson Water Reclamation Plant Phase 2 and 3 Capacity Expansion Project (February, 2006) and the expansion project is under construction. With this expansion, IRWD plans to increase its capacity on the existing MWRP site to produce sufficient reclaimed water to meet the projected demand in the year 2032. (Initial upgrades that are within existing permit authorizations and CEQA compliance are completed.) Additional reclamation capacity will augment local nonpotable supplies and improve reliability.

•NONPOTABLE SUPPLY - IMPORTED⁷

Baker Pipeline (currently available)

⁷ See Imported Supply - Additional Information, below, for information concerning the availability of the MWD supply.

Santiago Aqueduct Commission Joint Powers Agreement, dated September 11, 1961, as amended December 20, 1974, January 13, 1978, November 1, 1978, September 1, 1981, October 22, 1986, and July 8, 1999 (the "SAC Agreement"); Agreement Between Irvine Ranch Water District and Carma-Whiting Joint Venture Relative to Proposed Annexation of Certain Property to Irvine Ranch Water District, dated May 26, 1981 (the "Whiting Annexation Agreement"). Service connections OC-13/13A, OC-33/33A. The imported untreated water pipeline initially known as the Santiago Aqueduct and now known as the Baker Pipeline was constructed under the SAC Agreement, a joint powers agreement. The Baker Pipeline is connected to MWD's Santiago Lateral. IRWD's capacity in the Baker Pipeline includes the capacity it subleases as successor to LAWD, as well as capacity rights IRWD acquired through the Whiting Annexation Agreement. (To finance the construction of AMP parallel untreated reaches which were incorporated into the Baker Pipeline, replacing original SAC untreated reaches that were made a part of the AMP potable system, it was provided that the MWDOC Water Facilities Corporation, and subsequently MWDOC, would have ownership, and the participants would be sublessees.) IRWD has 52.70 cfs in the first reach, 12.50 cfs in each of the second, third and fourth reaches and 7.51 cfs in the fifth reach of the Baker Pipeline. Water is subject to availability from MWD.

•NONPOTABLE SUPPLY - NATIVE

Irvine Lake (currently available)

(i) Permit For Diversion and Use of Water (Permit No. 19306) issued pursuant to Application No. 27503; License For Diversion and Use of Water (License 2347) resulting from Application No. 4302 and Permit No. 3238; License For Diversion and Use of Water (License 2348) resulting from Application No. 9005 and Permit No. 5202. The foregoing permit and licenses, jointly held by IRWD (as successor to The Irvine Company (TIC) and Carpenter Irrigation District (CID)) and Serrano Water District (SWD), secure appropriative rights to the flows of Santiago Creek. Under Licenses 2347 and 2348, IRWD and SWD have the right to diversion by storage at Santiago Dam (Irvine Lake) and a submerged dam, of a total of 25,000 AFY. Under Permit No. 19306, IRWD and SWD have the right to diversion by storage of an additional 3,000 AFY by flashboards at Santiago Dam (Irvine Lake). (Rights under Permit No. 19306 may be junior to an OCWD permit to divert up to 35,000 AFY of Santiago Creek flows to spreading pits downstream of Santiago Dam.) The combined total of native water that may be diverted to storage under these licenses and permit is 28,000 AFY. A 1996 amendment to License Nos. 2347, 2348 and 2349 [replaced by Permit No. 19306 in 1984] limits the withdrawal of water from the Lake to 15,483 AFY under the licenses. This limitation specifically references the licenses and doesn't reference water stored pursuant to other legal entitlements. The use and allocation of the native water is governed by the agreements described in the next paragraph.

(ii) Agreement, dated February 6, 1928 ("1928 Agreement"); Agreement, dated May 15, 1956, as amended November 12, 1973 ("1956 Agreement"); Agreement, dated as of December 21, 1970 ("1970 Agreement"); Agreement Between Irvine Ranch Water District and The Irvine Company Relative to Irvine Lake and the

Acquisition of Water Rights In and To Santiago Creek, As Well As Additional Storage Capacity in Irvine Lake, dated as of May 31, 1974 ("1974 Agreement"). The 1928 Agreement was entered into among SWD, CID and TIC, providing for the use and allocation of native water in Irvine Lake. Through the 1970 Agreement and the 1974 Agreement, IRWD acquired the interests of CID and TIC, leaving IRWD and SWD as the two co-owners. TIC retains certain reserved rights. The 1928 Agreement divides the stored native water by a formula which allocates to IRWD one-half of the first 1,000 AF, plus increments that generally yield three-fourths of the amount over 1,000 AF.⁸ The agreements also provide for evaporation and spill losses and carryover water remaining in the Lake at the annual allocation dates. Given the dependence of native water on rainfall, for purposes of this assessment only a small portion of IRWD's share of the 28,000 AFY of native water rights (4,000 AFY in normal years and 1,000 AFY in single and multiple-dry years) is shown in currently available supplies, based on averaging of historical data. However, IRWD's ability to supplement Irvine Lake storage with its imported untreated water supplies, described herein, offsets the uncertainty associated with the native water supply.

•**NONPOTABLE SUPPLY - GROUNDWATER**

Irvine Subbasin / Irvine Desalter (currently available)

(i) IRWD's entitlement to produce nonpotable water from the Irvine Subbasin is included within the Irvine Subbasin Agreement. See discussion of the Irvine Subbasin Agreement under Potable Supply - Groundwater; paragraph (iv), above.

(ii) See discussion of the Irvine Desalter project under Potable Supply - Groundwater, paragraph (v), above. The Irvine Desalter project will produce nonpotable as well as potable water.

•**IMPORTED SUPPLY - ADDITIONAL INFORMATION**

As described above, the imported supply from MWD is contractually subject to availability. To assist local water providers in assessing the adequacy of local water supplies that are reliant in whole or in part on MWD's imported supply; MWD has provided information concerning the availability of the supplies to its entire service area. In its most recently adopted RUWMP, MWD has extended its planning timeframe out through 2035 to ensure that MWD's 2010 RUWMP may be used as a source document for meeting requirements for sufficient supplies. In addition, the RUWMP includes "Justifications for Supply Projections" (Appendix A-3) that details the planning, legal, financial, and regulatory basis for including each source of supply in the plan. The RUWMP summarizes MWD's planning initiatives over the past ten years, which includes the Integrated Resources Plan (IRP), the IRP Update, the Water Surplus and

⁸ The 1956 Agreement provides for facilities to deliver MWD imported water into the Lake, and grants storage capacity for the imported water. By succession, IRWD owns 9,000 AFY of this 12,000 AFY imported water storage capacity. This storage capacity does not affect availability of the imported supply, which can be either stored or delivered for direct use by customers.

Drought Management Plan, Strategic Plan and Rate Structure. The reliability analysis in MWD's IRP Update (October 2010) showed that MWD can maintain reliable supplies under the conditions that have existed in past dry periods throughout the period 2015 through 2035. The RUWMP includes tables that show the region can provide reliable supplies under both the single driest year (1977) and multiple dry years (1990-92) through 2035. MWD has also identified buffer supplies, including additional State Water Project groundwater storage and transfers that could serve to supply the additional water needed.

It is anticipated that MWD will revise its regional supply availability analysis periodically to supplement its RUWMP in years when the RUWMP is not being updated.

IRWD is permitted by the statute to rely upon the water supply information provided by the wholesaler concerning a wholesale water supply source, for use in preparing its UWMPs. In turn, the statute provides for the use of UWMP information to support water supply assessments and verifications. In accordance with these provisions, IRWD is entitled to rely upon the conclusions of the MWD RUWMP. As referenced above under Summary of Results of Demand-Supply Comparisons - Recent Actions on Delta Pumping, MWD has provided additional information on its imported water supply.

MWD's reserve supplies, together with the fact that IRWD relies on MWD supplies as supplemental supplies that need not be used to the extent IRWD operates currently available and under-development local supplies, build a margin of safety into IRWD's supply availability.

(2) Adopted capital outlay program to finance delivery of the water supplies.

All necessary delivery facilities currently exist for the use of the *currently available* and *under-development* supplies assessed herein, with the exception of future groundwater wells, MWRP expansion and IRWD sub-regional and developer-dedicated conveyance facilities necessary to complete the local distribution systems for the Project. IRWD's turnout at each MWD connection and IRWD's regional delivery facilities are sufficiently sized to deliver all of the supply to the sub-regional and local distribution systems.

With respect to future groundwater wells (PR Nos. 10285, 15423, 15427, 15428, 15051 and 15052) and the MWRP Phase 2 expansion (PR. Nos. 20214 and 30214), IRWD adopted its fiscal year 2011/12 capital budget on June 13, 2011 (Resolution No. 2011-20), budgeting portions of the funds for such projects. (A copy is available from IRWD on request.) For these facilities, as well as unbuilt IRWD sub-regional conveyance facilities, the sources of funding are previously authorized general obligation bonds, revenue-supported certificates of participation and/or capital funds held by IRWD Improvement Districts. IRWD has maintained a successful program for the issuance of general obligation bonds and certificates of participation on favorable borrowing terms, and IRWD has received AAA public bond ratings. IRWD has approximately \$601.7 million (water) and \$763.5 million (wastewater) of unissued, voter-approved bond authorization. Certificates of participation do not require voter approval.

Proceeds of bonds and available capital funds are expected to be sufficient to fund all IRWD facilities for delivery of the supplies under development. Tract-level conveyance facilities are required to be donated to IRWD by the Applicant or its successor(s) at time of development.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to capital outlay programs related to MWD's supplies.

(3) Federal, state and local permits for construction of delivery infrastructure.

Most IRWD delivery facilities are constructed in public right-of-way or future right-of-way. State statute confers on IRWD the right to construct works along, under or across any stream of water, watercourse, street, avenue, highway, railway, canal, ditch or flume (Water Code Section 35603). Although this right cannot be denied, local agencies may require encroachment permits when work is to be performed within a street. If easements are necessary for delivery infrastructure, IRWD requires the developer to provide them. The crossing of watercourses or areas with protected species requires federal and/or state permits as applicable.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to permits related to MWD's supplies.

(4) Regulatory approvals for conveyance or delivery of the supplies.

See response to preceding item (3). In addition, reclamation plant expansion will require approval of amendments to IRWD's permits issued by the Regional Water Quality Control Board.

See also *MWD's RUWMP*, Appendix A.3 Justifications for Supply Projections with respect to regulatory approvals related to MWD's supplies.

3. Other users and contractholders (identified supply not previously used).

For each of the water supply sources identified by IRWD, if no water has been received from that source(s), IRWD is required to identify other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, that source(s):

Water has been received from all listed sources. A small quantity of Subbasin water is used by Woodbridge Village Association for the purpose of supplying its North and South Lakes. There are no other public water systems or water service contractholders that receive a water supply from, or have existing water supply entitlements, water rights and water service contracts to, the Irvine Subbasin.

4. Information concerning groundwater included in the supply identified for the Project:

(a) Relevant information in the Urban Water Management Plan (UWMP):

See Irvine Ranch Water District 2010 UWMP, sections 4-D through 4-J.

(b) Description of the groundwater basin(s) from which the Project will be supplied:

The Orange County Groundwater Basin ("Basin") is described at pages 3-1 through 3-14 of the OCWD Master Plan Report, dated April, 1999 ("MPR") and in the more recent Groundwater Management Plan ("GMP") at pages 2-1 through 6-33⁹. The rights of the producers within the Basin vis a vis one another have not been adjudicated. The Basin is managed by the Orange County Water District (OCWD) for the benefit of municipal, agricultural and private groundwater producers. OCWD is responsible for the protection of water rights to the Santa Ana River in Orange County as well as the management and replenishment of the Basin. Current production from the Basin is approximately 366,000 AFY.

The Department of Water Resources has not identified the Basin as overdrafted in its most current bulletin that characterizes the condition of the Basin, Bulletin 118 (2003). The efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin are described in the OCWD MPR, including in particular, Chapters 4, 5, 6, 14 and 15 of the MPR. In addition to Orange County Water District (OCWD) reports listed in the Assessment Reference List, OCWD has also prepared a Long Term Facilities Plan ("LTFP") which provides updated information and was received by the OCWD Board in July 2009. The LTFP Chapter 3 describes the efforts being undertaken by OCWD to eliminate long-term overdraft in the Basin.

Although the water supply assessment statute (Water Code Section 10910(f)) refers to elimination of "long-term overdraft," overdraft includes conditions which may be managed for optimum basin storage, rather than eliminated. OCWD's Act defines annual groundwater overdraft to be the quantity by which production exceeds the natural replenishment of the Basin. Accumulated overdraft is defined in the OCWD Act to be the quantity of water needed in the groundwater basin forebay to prevent landward movement of seawater into the fresh groundwater body. However, seawater intrusion control facilities have been constructed by OCWD since the Act was written, and have been effective in preventing landward movement of seawater. These facilities allow greater utilization of the storage capacity of the Basin.

OCWD has invested over \$250 million in seawater intrusion control (injection barriers), recharge facilities, laboratories, and Basin monitoring to effectively manage the Basin. Consequently, although the Basin is defined to be in an "overdraft" condition, it is actually managed to allow utilization of up to 500,000 acre-feet of storage capacity of the basin during dry periods, acting as an underground reservoir and buffer against drought. OCWD has an optimal basin

⁹ OCWD has also prepared a Long Term Facilities Plan which provides updated information which was received and filed by its Board in July 2009.

management target of 100,000 acre-feet of accumulated overdraft provides sufficient storage space to accommodate increased supplies from one wet year while also provide enough water in storage to offset decreased supplies during a two- to three year drought. If the Basin is too full, artesian conditions can occur along the coastal area, causing rising water and water logging, an adverse condition. Since the formation of OCWD in 1933, OCWD has made substantial investment in facilities, Basin management and water rights protection, resulting in the elimination and prevention of adverse long-term “mining” overdraft conditions. OCWD continues to develop new replenishment supplies, recharge capacity and basin protection measures to meet projected production from the basin during normal rainfall and drought periods. (Source: 2009-2010 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District; OCWD MPR, *supra*.)

OCWD's efforts include ongoing replenishment programs and planned capital improvements. It should be noted under OCWD's management of overdraft to maximize its use for annual production and recharge operations, overdraft varies over time as the Basin is managed to keep it in balance over the long term. The Basin is not operated on an annual safe-yield basis. (OCWD MPR, section 3.2 and LTFP, section 6)

(c) Description and analysis of the amount and location of groundwater pumped by IRWD from the Basin for the past five years:

The following table shows the amounts pumped, by groundwater source:

(In AFY)

Year (ending 6/30)	DRWF/DATS/ OPA	Irvine Subbasin (IRWD)	Irvine Subbasin (TIC)	LAWD¹⁰
2011	34,304	7,055	0	0
2010	37,151	8,695	0	3
2009	38,140	7,614	0	0
2008	36,741	4,539	0	16
2007	37,864	5,407	0	6
2006	37,046	2,825	0	268
2005	36,316	2,285	628	357
2004	30,265	1,938	3,079	101
2003	24,040	2,132	4,234	598
2002	25,855	2,533	5,075	744

¹⁰ The water produced from IRWD's Los Alisos wells is not included in this assessment. IRWD is presently evaluating the future use of these wells.

(d) Description and analysis of the amount and location of groundwater projected to be pumped by IRWD from the Basin:

IRWD has a developed groundwater supply of 35,200 AFY from its Dyer Road Wellfield (including the Deep Aquifer Treatment System), in the main portion of the Basin.

Although TIC's historical production from the Subbasin declined as its use of the Subbasin for agricultural water diminished, OCWD's and other historical production records for the Subbasin show that production has been as high as 13,000 AFY. Plans are also underway to expand IRWD's main Orange County Groundwater Basin supply (characterized as *under-development* supplies herein). (See Section 2 (a) (1) herein). IRWD anticipates the development of additional production facilities within both the main Basin and the Irvine Subbasin. However, such additional facilities have not been included or relied upon in this assessment. Additional groundwater development will provide an additional margin of safety as well as reduce future water supply costs to IRWD.

The following table summarizes future IRWD groundwater production from currently available and under-development supplies.

(In AFY)

Year (ending 6/30)	DRWF ¹¹	Future GW ¹²	IDP (Potable)	IDP (Nonpotable)
2015	37,900	15,600	5,640	3,898
2020	37,900	22,100	5,640	3,898
2025	37,900	32,600	5,640	3,898
2032	37,900	32,600	5,640	3,898

(e) If not included in the UWMP, analysis of the sufficiency of groundwater projected to be pumped by IRWD from the Basin to meet to meet the projected water demand of the Project:

See responses to 4(b) and 4(d).

The OCWD MPR and LTFP examined future Basin conditions and capabilities, water supply and demand, and identified projects to meet increased replenishment needs of the basin. With the implementation of OCWD's preferred projects, the Basin yield in the year 2025 would be up to 500,000 AF. The amount that can be produced will be a function of which projects will be

¹¹ See Potable Supply - Groundwater, paragraph (iii), above. DRWF non-colored production above 28,000 AFY and colored water production above 8,000 AFY are subject to contractually-imposed assessments. In addition, seasonal production amounts apply. This also includes 1,000 AFY for the OPA well.

¹² Under development.

implemented by OCWD and how much increased recharge capacity is created by those projects, total demands by all producers, and the resulting Basin Production Percentage ("BPP") that OCWD sets based on these factors.¹³ Sufficient replenishment supplies are projected by the OCWD MPR to be available to OCWD to meet the increasing demand on the Basin. These supplies include capture of increasing Santa Ana River flows, purchases of replenishment water from MWD, and development of new local supplies. OCWD is moving forward with a number of replenishment supply projects, including the Groundwater Replenishment System project ("GWRS"). The OCWD MPR indicates that the GWRS will produce over 100,000 AFY of new replenishment supply from recycled water.

Production of groundwater can exceed applicable basin production percentages on a short-term basis, providing additional reliability during dry years or emergencies. Additional groundwater production is anticipated by OCWD in the Basin in dry years, as producers reduce their use of imported supplies, and the Basin is "mined" in anticipation of the eventual availability of replenishment water. (OCWD MPR, section 14.6.)

See also, Figures 1-8. IRWD assesses sufficiency of supplies on an aggregated basis, as neither groundwater nor other supply sources are allocated to particular projects or customers. Under the Irvine Subbasin Agreement, IRWD is contractually obligated to attribute the Subbasin supply only to TIC development projects for assessment purposes; however, the agreement does not allocate or assign rights in the Subbasin supply to any project.

5. ☒ This Water Supply Assessment is being completed for a project included in a prior water supply assessment. Date of prior assessment: May 24, 2011. Check all of the following that apply:

- ☒ Changes in the Project have substantially increased water demand.
- ☐ Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the Project.
- ☐ Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment.

6. References

Water Resources Master Plan, Irvine Ranch Water District, March, 2002 (supplemented January, 2004)

2010 Urban Water Management Plan, Irvine Ranch Water District, June, 2011

¹³ OCWD has adopted a basin production percentage of 65% for 2011-12. In prior years OCWD has maintained a basin production percentage that is higher than the current percentage, and IRWD anticipates that such reductions may occur from time to time as a temporary measure employed by OCWD to encourage lower pumping levels as OCWD implements other measures to reduce the current accumulated overdraft in the Basin. Any such reductions are not expected to affect any of IRWD's currently available groundwater supplies listed in this assessment, which are subject to a contractually-set equivalent basin production percentage as described, or are exempt from the basin production percentage.

Integrated Water Resources Plan Update, Metropolitan Water District of Southern California, July, 2004

Proposed Framework for Metropolitan Water District's Delta Action Plan, Metropolitan Water District of Southern California, May 8, 2007

Board Information Report, Metropolitan Water District of Southern California, October 9, 2007

2007 IRP Implementation Report, Metropolitan Water District of Southern California, October, 2007

Master Plan Report, Orange County Water District, April, 1999

Groundwater Management Plan, Orange County Water District, March, 2004

Final Draft Long-Term Facilities Plan, Orange County Water District, January 2006

2008-2009 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

2009-2010 Engineer's Report on Groundwater Conditions, Water Supply and Basin Utilization in the Orange County Water District, Orange County Water District

Progress on Incorporating Climate Change into Management of California's Water Resources, California Department of Water Resources, July 2006

Section 15 of the Rules and Regulations – Water Conservation and Water Supply Shortage Program, Irvine Ranch Water District, February 2009

Water Shortage Contingency Plan, Irvine Ranch Water District, February 2009

2010 Integrated Resources Plan Update, Metropolitan Water District of Southern California, October 2010

Regional Urban Water Management Plan, Metropolitan Water District of Southern California, November 2010

Exhibit A

Depiction of Project Area

EXHIBIT "A"

The Project also proposes to implement and potentially enhance some of the improvements to the previously approved Orange County Great Park Sports Park including additional athletic fields and athletic facilities, as well as additional seating within a previously approved soccer stadium.

Vicinity Map



Exhibit B

Uses Included in Project

EXHIBIT "B" ENGINEERING & CONSTRUCTION

April 4, 2012

APR 09 2012

Irvine Ranch Water District
15600 Sand Canyon Avenue
P.O. Box 57000
Irvine, CA 92619-7000

IRVINE RANCH
WATER DISTRICT

Re: Request for Water Supply Availability Assessment (Water Code §10910 *et seq.*)

The City of Irvine hereby requests an assessment of water supply availability for the below-described project. The City has determined that the project is a "project" as defined in Water Code §10912, and has determined that a supplemental environmental impact report is required for the project.

Proposed Project Information

Project Title: Heritage Fields Project 2012- General Plan Amendment and Zone Change (see project description in Exhibit A)

Location of project: Former MCAS El Toro Base, Planning Areas 30 and 51. The boundaries of Planning Area 51 generally include the Eastern Transportation Corridor to the west, the Foothill Transportation Corridor to the east, the Southern California Regional Rail Authority (SCRRA) rail lines to the south, and Irvine Boulevard and the storm channel near Alton Parkway to the north. Planning Area 51 abuts Planning Areas 30 and 32 to the south, Irvine Spectrum 2 – Planning Area 35 to the east, and Planning Areas 9 and 40 to the west. The boundaries of Planning Area 30 generally include Interstate 5 (Santa Ana Freeway) to the south, the SCRRA rail lines to the north, and the Irvine Spectrum to the east and west (Irvine Spectrum 2- Planning Area 35 and Irvine Spectrum 3 - Planning Area 32). See attached Vicinity Map.

- ☐ Previous Water Supply Assessment including this project was prepared on: May 24, 2011. This application requests a new Water Supply Assessment, due to the following (check all that apply):
- ☒ Changes in the project have substantially increased water demand
- ☐ Changes in circumstances or conditions have substantially affected IRWD's ability to provide a sufficient water supply for the project
- ☐ Significant new information has become available which was not known and could not have been known at the date of the prior Water Supply Assessment

(Enclose maps and exhibits of the project)

Type of Development:

- ☒ Residential: No. of dwelling units: 4,894 units (in prior assessment), 3,412 units converted from current non-residential entitlement, and 1,194 new density bonus units (overall total 9,500 units). An additional 889 units can be converted from 535,000 square feet of Multi-Use and 311 new density bonus units associated with this option conversion (potential for up to 1,200 additional units total).

- ☐ Shopping center or business: No. of employees _____ Sq. ft. of floor space _____
- ☐ Commercial office: No. of employees _____ Sq. ft. of floor space _____
- ☐ Hotel or motel: No. of rooms _____
- ☐ Industrial, manufacturing, processing or industrial park: No. of employees _____
- No. of acres _____ Sq. ft. of floor space _____
- ☐ Mixed use (check and complete all above that apply)

- ☒ Other: Non-Residential (220,000 square feet of Retail & 2,600,000 square feet of R&D) from current entitlement per previous Water Supply Assessment, 1,318,200 square feet of non-residential Multi-Use and 764,000 square feet of R&D converted from current non-residential entitlement per previous Water Supply Assessment with addition of (1) 2,600 student school and potential enhancements to some of the improvements of the previously approved Orange County Great Park Sports Park including additional athletic fields and athletic facilities, as well as additional seating within a previously approved soccer stadium.

Total acreage of project: per original Water Supply Assessment plus approximately 11 acres between the current western boundary of Planning Area 51 and SR-133 between Trabuco Road and Irvine Blvd

Acreage devoted to landscape: (per original Water Supply Assessment)

Greenbelt _____ golf course _____ parks _____

Agriculture _____ other landscaped areas _____

Number of schools addition of (1) 2,600 student school Number of public facilities _____

Other factors or uses that would affect the quantity of water needed, such as peak flow requirements or potential uses to be added to the project to reduce or mitigate environmental impacts:

Landscaped areas will be irrigated via reclaimed water

What is the current land use of the area subject to a land use change under the project?

Per previous Water Supply Assessment

Is the project included in the existing General Plan? Yes If no, describe the existing General Plan Designation _____

The City acknowledges that IRWD's assessment will be based on the information hereby provided to IRWD concerning the project. If it is necessary for corrected or additional information to be submitted to enable IRWD to complete the assessment, the request will be considered incomplete until IRWD's receipt of the corrected or additional information. If the project, circumstances or conditions change or new information becomes available after the issuance of a Water Supply Assessment, the Water Supply Assessment may no longer be valid. The City will request a new Water Supply Assessment if it determines that one is required.

The City acknowledges that the Water Supply Assessment shall not constitute a "will-serve" or in any way entitle the project applicant to service or to any right, priority or allocation in any supply, capacity or facility, and that the issuance of the Water Supply Assessment shall not affect IRWD's obligation to provide service to its existing customers or any potential future customers including the project applicant. In order to receive service, the project applicant shall be required to file a completed Application(s) for Service and Agreement with the Irvine Ranch Water District on IRWD's forms, together with all fees and charges, plans and specifications, bonds and conveyance of necessary easements, and meet all other requirement as specified therein.

CITY OF IRVINE /COUNTY OF ORANGE

By: 

REQUEST RECEIVED:

Date: April 12, 2012

By: 
Irvine Ranch Water District

REQUEST COMPLETE:

Date: April 23, 2012

By: 
Irvine Ranch Water District

Exhibit A

Project Description: The Project proposes to combine Planning Areas 30 and 51 into a single Planning Area, Planning Area 51, and include the approximately 11 acres between the current western boundary of Planning Area 51 and SR-133 between Trabuco Road and Irvine Blvd, currently in Planning Area 9, in Planning Area 51 so that the Project will be a cohesive development governed by a unified set of land use and development regulations.

Consistent with the goal of unified land use and development regulations, the Heritage Fields Development located in District 6 (zoned 3.2 Transit Oriented Development), and in District 2 and District 3, consisting of 3.2 Transit Oriented Development, 5.4 B General Industrial, and 4.3 Vehicle Related Commercial will be rezoned to 8.1 Trails and Transit Oriented Development, consistent with the balance of the Heritage Fields Development Districts. In addition, a portion of District 5 currently zoned 8.1 Trails and Transit Oriented Development and the 13-acres currently zoned 1.1 Agriculture will be rezoned to 8.1C Trails and Transit Oriented Development (TTOD) to allow for flexible placement of approximately 132 acre wildlife corridor within the area designated as 8.1C TTOD. The approximately 11 acres between the current western boundary of Planning Area 51 and SR-133 between Trabuco Road and Irvine Blvd will be zoned 8.1 TTOD and designed as Orange County Great Park in the General Plan.

Amend the Master Plan of Arterial Highways, General Plan Figure B-1, and other General Plan maps as necessary to eliminate the extension of Rockfield from the Project boundary to Marine Way.

The Project also proposes to amend the General Plan and Zoning Ordinance to allow the following:

- Add 3,412 residential units within Planning Area 51, in addition to the 4,894 units already allocated in Districts 1 North, 1 South, 4, 7, and 8.
- Modify non-residential uses to allow:
 - 3,364,000 square feet of Medical and Science
 - 1,318,200 square feet of Multi-Use
 - The Project proposal includes an option to convert up to 535,000 square feet of the proposed Multi-Use intensity to residential intensity for an additional 889 dwelling units within District 6 and Lot 48 of 2nd Amended VTTM 17008, subject to a vehicle trip limit.
 - 220,000 square feet of Community Commercial
- Grant, pursuant to State law, up to 1,194 additional Density Bonus units (35% of 3,412) plus any additional Density Bonus units associated with the optional conversion and granted pursuant to State law.
- Encourage Accessory Retail within Planning Area 51, as defined in the City of Irvine Zoning Code.
- Revise figures, tables, sections within the General Plan and Zoning Code, as appropriate.

The Project consists of 4,894 already approved dwelling units plus 4,606 additional dwelling units (3,412 base units and 1,194 Density Bonus units) as well as a 2,600 student high school in District 5. The project also includes the option to convert up to 535,000 square feet of Multi-Use to up to 889 base units and 311 Density Bonus units, granted pursuant to State law. The Project will also designate 8.1C TTOD zoning. The current Great Park zoning includes a defined wildlife corridor location with a 1.4 Preservation zoning from Irvine Boulevard south to the boundary of the SCRRA rail lines, consisting of approximately 132 acres. This 8.1C TTOD zoning would provide flexibility for the wildlife corridor to be located appropriately considering planning and compatible land uses within a portion of District 5 and District 6. The wildlife corridor shall consist of approximately 132 acres. Once the exact location is finally determined, the Project would authorize the corridor to then be designated as 1.4 Preservation zoning and all other properties within the 8.1C TTOD zoning will be designated 8.1 Trails and Transit Oriented Development without further Planning Commission action.