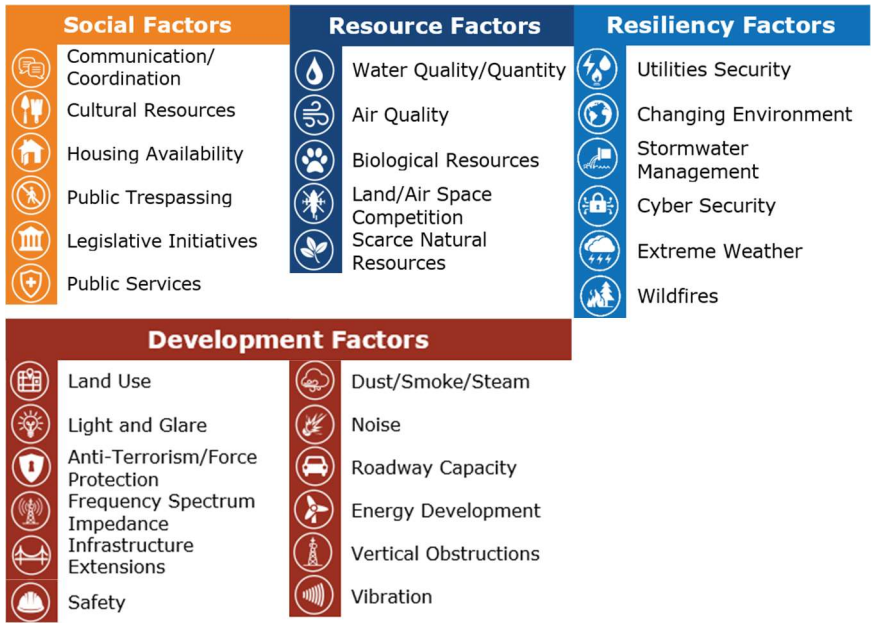
MARCH ARB COMPATIBLE USE STUDY

Compatibility Factors Exercise

The following compatibility findings have been identified as part of the March Air Reserve Base Compatible Use Study (MARB CUS). This list was developed based on input from stakeholder interviews, the MARB CUS Policy Committee and Technical Working Group, and the technical evaluation that was conducted as part of the MARB CUS process. The findings are organized in terms of the 29 compatibility factors listed below and include a brief description or issue statement. Note, that not every compatibility factor has findings associated with it.



Exercise Instructions

Please Provide Your Opinion

For each compatibility issue, provide your input on the timing to address each issue by placing a colored dot sticker in the appropriate column, based on the description below. Input received will be used to assist in the development of compatibility recommendations to address each issue. Indicate the timeframe to address each issue by selecting one of the following:

- ☐ Near-term – The issue is an immediate concern and should be addressed as soon as possible (1-3 years)
- ☐ Long-term – This issue is a long-term concern and may require additional resources to address (3 years and beyond)
- ☐ On-going – This issue will require ongoing measures to address
- ☐ No Opinion – This issue does not affect you, or you do not have enough information to determine the timeframe

Ref ID #	Issue Statement	Timeframe to Address			
		Near-term (1 to 3 years)	Long-term (3 or more years)	On-going	No Opinion
Social Factors					
Communication / Coordination (COM)					
COM-1	**Formalized communication is limited between March ARB and regional planning entities.** There is no official standing forum for March ARB and the communities/agencies around the installation to identify, communicate and coordinate on topics of interest to all parties. March ARB currently works individually with local communities/agencies on an as-needed basis. As issues arise, the communication and coordination are handled on a case-by-case basis through the exchange of emails, phone calls, or other methods between March ARB and individuals of the jurisdiction/agency. Lack of a formal standing communication/coordination process increases the likelihood of missed opportunities and risks dealing with issues "late to need" or "after the fact."				
~~**COM-2**~~	~~**The leadership rotation schedule at Airport Land Use Commission (ALUC) and March ARB can create communication gaps in project reviews.**~~ ~~This gap in time and turn-around in leadership sometimes creates communication gaps when the ALUC is conducting project reviews.~~				
COM-3	**March ARB is required to route responses to proposed development through Headquarters Air Force Reserve Command (HQ AFRC) at Robins AFB.** This can delay response to the proposed development, thus, not allowing for MARB comments to be considered.				

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Communication / Coordination (COM) Continued					
COM-4	**Formalized communication is limited between March ARB and the Easter Municipal Water District (EMWD).** March ARB has minimal communication/coordination with the EMWD. While the EMWD does not provide services directly to the installation, they are very closely involved with projects and actions that directly impact the installation mission essential operations. In some cases, the EMWD is in close partnership with agencies, such as the Western Municipal Water District (WMWD), that directly support March ARB. The lack of a formal communication/coordination process with the EMWD increases the potential for impacts on March ARB activities.				
COM-5	**Some concerns with incompatible development on future projects within the existing March Joint Planning Authority (JPA) jurisdiction.** The March JPA currently functions as the liaison agency for MARB on development review requests. With the March JPA sunset ~~and the reduced noise contours in the 2018 AICUZ,~~ there are concerns that future development ~~within MARB excess land~~ will not be adequately communicated with the installation.				
Public Trespassing (PT)					
PT-1	**There are concerns about development next to or along the March ARB security perimeter fence line.** *(See also ATFP-1)* Physical development of large warehouse structures and other tall structures directly along the perimeter of March ARB presents security challenges to Air Force security requirements. Currently, there are no specific setback or height restrictions for new construction along the boundary of the air reserve base.				

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Resource Factors					
Water Quality / Quantity (WQQ)					
WQQ-1	**Concern with the prioritization of potable water deliveries to March ARB in the event of major shortages.** There is a concern that there is no formal agreement that ensures that the WMWD would prioritize delivery of adequate potable water supplies to March ARB in the event of local/regional major water shortages.				
WQQ-2	**The sanitary sewer infrastructure serving March ARB is in need of repair/replacement.** The infrastructure that provides sanitary sewer service to March ARB is old and in some cases is failing. The WMWD is responsible for the capital repairs, maintenance and operation of the sanitary sewer system including the infrastructure located on the installation. The March ARB mission is at risk without an adequate sanitary sewer capability.				
WQQ-3	**Planned pump and treat operations to address rising groundwater may impact March ARB's ongoing contamination cleanup.** The EMWD is implementing the North Perris Groundwater Project operations to try and reduce the level of groundwater on and around March ARB. The cause of the rising groundwater is not fully understood. While pumping and treating the groundwater may help address other concerns, it can potentially affect the current March ARB pump and treat activities of existing groundwater contamination that resulted from past installation activities.				

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Resiliency Factors					
Utilities Security (US)					
US-1	**March ARB lacks a redundant power connection to off-base supplier.** Currently, March ARB is provided electrical power service via a single connection to the off base electrical utility power grid. Redundant connections to the power grid increase installation resiliency in the event of a failure of a single-point grid connection. Failure to provide an alternate connection to the power grid or provide alternative means of a redundant electrical power supply increase the likelihood of temporary power interruptions and possible mission failure in the event of longer disruptions of service.				
US-2	**March ARB has no redundant water supply service line.** Currently, March ARB is provided potable water from the WMWD via a single water service line. A project has been funded that will allow WMWD to provide an additional service line via the EMWD water distribution system. Lack of a redundant water service line has the potential to impact military operations in the event of a single point failure.				
Changing Environment (CE)					
CE-1	**Rising groundwater impacts existing facilities and the design and construction of new facilities on March ARB.** The rising groundwater table has the potential to impact existing facilities/infrastructure on March ARB. This includes impacts on the airfield runways and related facilities. In addition, new designs and construction projects, such as the KC-46 beddown, must account for impacts such as saturated soils that create significant technical, budget, and schedule challenges. *(See also WQQ-3)*				

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Stormwater Management (SM)					
SM-1	**Flooding occurs along the perimeter of March ARB during significant rainfall events.** Flooding along Cactus Avenue, on the northern border between March ARB and the City of Moreno Valley, occurs during heavy rainfall. The flooding impacts traffic entering and leaving the base entry control point. Heavy flooding has historically occurred along the eastern and western installation boundaries, resulting in infrastructure damage and traffic impacts both on and off the installation. The area along the western boundary of the base is impacted by stormwater runoff from I-215 and locations to the west.				
SM-2	**Rising groundwater in the vicinity of March ARB may potentially exacerbate stormwater sheet flow and flooding.** Rising groundwater levels on and around March ARB may potentially exacerbate stormwater sheet flow and flooding in the area. As the ground becomes more saturated from higher groundwater levels, portions of stormwater flow that might typically percolate into the ground will remain on the surface and create additional sheet flow and/or ponding on and around the installation.				
SM-3	**Stormwater collects around the south end of Graeber Street and Riverside Drive causing heavy flooding.** During heavy rain events, stormwater tends to flow towards the southeastern end of Graeber Street and the southern end of Riverside Drive. The intersection of the roadways and the immediate surrounding area floods as a result. It is reported that Graeber Street lacks adequate stormwater drainage.				

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Development Factors					
Land Use (LU)					
LU-1	**Riverside County Airport Land Use Compatibility Plan (ALUCP) does not specifically address Runway 12-30.** March ARB has identified Runway 12-30 for capital improvements and potential extension of the runway to 5,000 ft (note: this is due to the fact this Runway 12-30 was not covered by the 2005 AICUZ study). APZs and CZs for this runway are not protected to the extent necessary in accordance with the ALUCP.				
LU-2	**Commercial and industrial land use inside Accident Potential Zones (APZs) I and II of Runway 14-32 (and Runway 12-30 south) is nearing a complete build-out near a FAR of 0.5.** This represents a significant risk for structural impact from air mishaps within the accident potential zones. The probability of mishap within APZ I is 10%; the probability of mishap within APZ II is 5.6%.				
LU-3	**Concern with inconsistent application of community density standards for developments within the March ARB runway safety zone.** Community density standards for built structures and people vary for APZs I and II of Runways 12-30 and 14-32. ~~Updated~~ Department Of Defense (DOD) Air Installations Compatible Use Zones (AICUZ) guidance ~~from 2020 applies i~~[illegible]~~nsistent~~ usage, and Floor Area Ratio (FAR) ~~recommendations~~ for APZs I and II, e.g., manufacturing, retail trade hardware, and warehousing, ~~have conflicting~~ FAR recommendations.				

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Land Use (LU) Continued					
LU-4	**Development within the March ARB airfield runway clear zone (CZ) creates a potential safety hazard.** Private and commercial structures inside the southern CZ of Runway 14-32 conflict with DOD AICUZ guidance and Air Force recommendations for graded clear zones. "No structures (except airfield lighting and navigational aids necessary for the safe operation of the airfield when there are no other siting options), buildings, or above-ground utility and communications lines should normally be located in CZ areas on or off the air installation." The presence of activities within the clear zone presents public safety hazards and risks to flight crews.				
LU-5	**The location of residential development within the March ARB airfield runway safety zone creates a potential safety hazard.** The presence of a residential neighborhood at Ramona Expressway and Webster Ave inside southern APZ I of Runway 14-32 conflicts with DOD AICUZ guidance and Air Force recommendations for accident potential zones. DOD recommends no residential usage in APZ I and no more than two dwelling units per acre for APZ II.				
LU-6	**Concern with altimeter inaccuracy on approach/departure due to incompatible development.** Air Force pilots report "bouncing readouts" on final approach due to the significant size and placement of commercial buildings beneath the flight path within APZs I and II. This can affect aircraft flight controls and creates additional pilot demands to ensure flight controls are stable during landings.				

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Safety (SA)					
SA-1	**Increased development encouraging wildlife to utilize March ARB airfield as habitat.** Increased development in the direct vicinity of March ARB is potentially encouraging the movement of birds/wildlife to the airfield, causing increased safety concerns for airfield management and pilots. The abundance of ground squirrels and stray animals increases the chances of large predators moving into the airfield environment in search of food and water. This also creates the increased potential for foreign object damage (FOD) to aircraft, and damage to critical systems on the airfield, due to animals potentially chewing wires. *This finding includes concerns with but is not exclusive to, the California Ground Squirrel, Horned Larks, and Coyotes.*				
SA-2	**Ponding stormwater on the airfield acts as an attractant for wildlife.** Stormwater periodically floods and ponds on the southwest portion of the airfield. This standing water attracts wildlife, especially birds and small mammals which attract birds, which pose a flight safety threat to aircraft sorties in the vicinity of the airfield.				
SA-3	**Concern with the location of critical roadways (Interstate 215 + Cactus Ave) within the March ARB runway clear zone and accident potential zone.** The presence of Interstate 215 through the northern clear zone of Runway 14-32 conflicts with US Air Force AICUZ recommendations for graded clear zones. Interstate 215 interchanges with Cactus Avenue in APZ I and Alessandro Blvd in APZ II of Runway 14-32 present a risk of a corridor shut down due to an aircraft mishap.				

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Light and Glare (LG)					
LG-1	**Increased glare from residential and commercial solar array installation poses a potential hazard to safe flight operations at March ARB.** The installation of multiple solar arrays and panels on rooftops of residential homes and commercial facilities around March ARB can increase light reflection, causing glare/glint that impacts the ability of pilots to conduct safe flight operations near the airfield.				
LG-2	**Cumulative impacts of ambient lighting due to increased development outside of ALUC authority.** Operational flying units at March ARB routinely conduct night training operations. MARB has identified concerns with ambient artificial nighttime outdoor lighting around the base, affecting the unit's ability to meet military readiness training requirements for aircrew proficiency. Over the last 10 to 15 years, development has increased the cumulative effects of artificial nighttime outdoor lighting.				
Frequency Spectrum Impedance / Interference (FSI)					
FSI-1	**Implementation of 5G cellphone service in the airfield vicinity may impact flight safety.** There is a concern that the new 5G cell phone service may cause interference with aircraft radar altimeter readings. This poses a flight safety hazard, especially during instrument landings. In addition, there is a possibility that 5G may also impact the airport surveillance radar systems at March ARB.				

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Anti-Terrorism / Force Protection (ATFP)					
ATFP-1	**There are concerns about development next to or along the March ARB security perimeter fence line.** *(See also PT-1)* Physical development of large warehouse structures and other tall structures directly along the perimeter of March ARB presents security challenges to Air Force security requirements. Currently, there are no specific setback or height restrictions for new construction along the boundary of the air reserve base.				

Other Findings: (Please identify any additional compatibility findings you would like to see addressed in the MARB CUS)

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