An Environmental Planning Perspective of the USMC Buildup on Guam

Al Borja, Environmental Director, Defense Policy Review Initiative, NAVFAC Marianas

30 November 2016
Conservation, Development and Mission

- **Conservation** – Managing Resources to Support the Existing and Future Mission

- **Development** – From Planning to Avoid, Minimize and Mitigate Potential Impacts of Growth to Implementation

- **Mission** – Future Establishment of Marine Corps Base Guam and Implementation of Environmental Work During Construction and Beyond
Integrated Natural Resource Management Plan – Per the Sikes Act, effective implementation can prevent designations of critical habitat, which could restrict existing military mission. Sikes Act promotes opportunities to work with GovGuam, University of Guam and other non-profits on conservation work.

Integrated Cultural Resource Management Plan – Implementation is mandated under the National Historic Preservation Act (NHPA) and other requirements; outlines a management program that emphasizes preservation of historic properties, historic data collection and evaluation, and continuing engagement with the SHPO and public.
Endangered Species Act (ESA): If a land manager does not collect information on uncommon or rare species within their footprint, this may result in species inadvertently listed under ESA.

National Historic Preservation Act: If a land manager does not collect information on cultural resources within their footprint, this may result in future construction or activities being delayed or canceled due to inadvertent discoveries of remains or artifacts.
Endangered Species Act (ESA): Prioritizing reuse of existing developed footprint leads to less likelihood that future consultations will involve adverse effects to listed species. A larger inventory of conserved habitat ensures that listed species have a greater chance for recovery with appropriate investments.

National Historic Preservation Act: The 2011 Programmatic Agreement process and public concerns with the proposed firing range alternative near the Pågat area led to a new look at Surface Danger Zones and impact to lands outside federal jurisdiction. As a result the Navy re-sited the firing ranges at AAFB Northwest Field, limiting direct impacts to federal lands.
Development: Planning

Identify the Broad Requirements

**Identify site selection criteria early**
- What are the space/operational needs of the new development?
- Developed Conceptual Plans for Development (e.g. Traffic, Utilities, Building Layouts)
- Formalized in Description of Proposed Action and Alternatives under NEPA

**Engage with regulatory and resource agencies**
- Consult/coordinate on direct and indirect impacts to resources under agency jurisdiction and to establish future process of engagement

**Engage with the host community**
- Provisions to ensure public participation and consideration of public input for proposed development are typically required under both federal and local law.
# Development: Review Avoidance, Minimization and Mitigation

## Key Differences Between 2010 Final EIS and 2015 Final SEIS

<table>
<thead>
<tr>
<th>2010 Final EIS</th>
<th>2015 Final SEIS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Approximately 8,600 Marines and 9,000 dependents relocating over 5 years</strong></td>
<td><strong>Relocated Population</strong></td>
</tr>
<tr>
<td><strong>7-year intense construction boom followed by sharp decline</strong></td>
<td><strong>Construction Period</strong></td>
</tr>
<tr>
<td><strong>More than 79,000 new Guam residents at peak</strong></td>
<td><strong>Peak Population Increase</strong></td>
</tr>
<tr>
<td><strong>More than 33,000 additional Guam residents</strong></td>
<td><strong>Steady State Population Increase</strong></td>
</tr>
<tr>
<td><strong>2,580 acres at Finegayan preferred alternative</strong></td>
<td><strong>Project Area: Cantonment</strong></td>
</tr>
<tr>
<td>Acquisition of 688 acres of non-federal land at Finegayan preferred alternative</td>
<td><strong>Land Acquisition: Cantonment</strong></td>
</tr>
<tr>
<td>5,529 acres for Route 15 preferred alternative (4,439 acres in SDZs, mostly over ocean)</td>
<td><strong>Project Area: LFTRC</strong></td>
</tr>
<tr>
<td>Acquisition of more than 1,000 acres of non-federal land at Route 15 preferred alternative</td>
<td><strong>Land Acquisition: LFTRC</strong></td>
</tr>
<tr>
<td><strong>Approximately 5,000 Marines and 1,300 dependents relocating over 12 years</strong></td>
<td></td>
</tr>
<tr>
<td><strong>13-years of moderate construction activity with gradual phase out</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Less than 10,000 new Guam residents at peak</strong></td>
<td></td>
</tr>
<tr>
<td><strong>Approximately 7,400 additional Guam residents</strong></td>
<td></td>
</tr>
<tr>
<td><strong>1,723 acres at Finegayan/AAF preferred alternative</strong></td>
<td></td>
</tr>
<tr>
<td><strong>No land acquisition at Finegayan/AAF preferred alternative</strong></td>
<td></td>
</tr>
<tr>
<td><strong>3,957 acres for Northwest Field preferred alternative (3,701 acres in SDZs, mostly over ocean)</strong></td>
<td></td>
</tr>
<tr>
<td><strong>No land acquisition at Northwest Field preferred alternative</strong></td>
<td></td>
</tr>
</tbody>
</table>
Development: Implementation

• Create master list of Environmental Mitigations and Best Practices
• Environmental requirements applicable to construction must be built into enforceable mechanisms (i.e. contracts).
• Monitor compliance
• Meet with key regulatory/resource agencies
• Keep track and place controls on physical footprint of development
“Ensure that the relocated Marines are organized, trained, and equipped as mandated …”
“…satisfy individual live-fire training requirements and establish an operational Marine Corps presence on Guam.”
Principles for Design

Master Plan design principles will result in a compact base that meets operational needs while minimizing use of resources and space.

**Buildings**
- Mixed Use
- Multi-Story
- Flexible Design
- Identifiable Entry Ways
- Roof-Mounted Photovoltaics
- Tropical Architectural Style
- Front Porches
- Open Visibility
- Maximize Renewable Energy Opportunities
- Convenient Access
- Consistent Architectural Style
- Sustainable Design

**Layout and Organization**
- Transit Stops/Transit Oriented
- Street Trees and Shade
- Hidden Utilities
- Compact Development
- Hill Development
- Live Where You Work
- Walkable
- Consolidated Training Areas
- Mixed Land Uses
- Integrated Community
- Town Center
- 1/2 mile/10 Minute Walking Distances

**Amenities**
- Community Support Facilities
- Connected Campus
- Shared Courtyards
- Accessible Shops and Restaurants
- Functional Relationships
- Landmarks
- Main Street Pedestrian Corridor
- Limited Vehicle Traffic in Community Center
- Removable Bollards

**Connectivity and Open Space**
- Reservations for Future Growth
- Buffer Between Uses
- Increased Density at Core
- Sustainable Landscape Elements
- Water Features/LID Stormwater
- Native Vegetation
- Connected Open Spaces
- Engaging Open Space
- Defined Gathering Areas
- Views
- Covered Walkways
- Planted Medians
- Street Lighting
- Reduced and Hidden Parking
- Bike Parking
We look forward to continued coordination with GovGuam agencies on regulatory, public works and utility matters, among others. This ensures that we address local requirements.