

**APPENDIX B**

**SUNRISE VISTA GOLF COURSE  
ENVIRONMENTAL MANAGEMENT (GEM) PLAN**

# **Sunrise Vista Golf Course Environmental Management plan**

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## ***LIST OF ACRONYMS AND ABBREVIATIONS***

99 <sup>th</sup> ABW	99 <sup>th</sup> Air Base Wing
99 <sup>th</sup> ABW/CC	99 <sup>th</sup> Air Base Wing Commander
99 <sup>th</sup> CES	99 <sup>th</sup> Civil Engineering Squadron
99 <sup>th</sup> CES/CEAN	99 <sup>th</sup> Civil Engineering Squadron, Environmental Section
AFCEE	Air Force Center for Engineering & the Environment
AICUZ	Air Installation Compatible Use Zone
BASH	Bird/Wildlife Aircraft Strike Hazard
BLM	Bureau of Land Management, Department of the Interior
CCRFCDD	Clark County Regional Flood Control District
DoD	Department of Defense
EA	Environmental Assessment
ECQ	Environmental Compatibility Quotient
EIAP	Environmental Impact Analysis Process
EO	Executive Order
ERP	Environmental Restoration Program
GCEBA	Golf Course Environmental Baseline Assessment
GEM	Golf Course Environmental Management
GIS	Geographic Information System
GPS	Global Positioning System
INRMP	Integrated Natural Resources Management Plan
LDG	Landscape Design Guide
MAJCOM	Major Command
MBTA	Migratory Bird Treaty Act of 1918

NAFB	Nellis Air Force Base
NDOW	Nevada Department of Wildlife
NEPA	National Environmental Policy Act
NTTR	Nevada Test and Training Range
PL	Public Law
PMP	Pest Management Plan
RCRA	Resource Conservation and Recovery Act
USAF	U.S. Air Force or Air Force
USFS	U.S. Forest Service, Department of Agriculture
WWTP	Wastewater Treatment Plant

## ***EXECUTIVE SUMMARY***

At the direction of the ACC, the 99th Civil Engineering Squadron, Environmental Section (99CES/CEAN) has prepared an Integrated Natural Resource Management Plan (INRMP) to serve as a practical management guideline for the day-to-day operations and management of the natural resources on NAFB, CAFB and NTTR. The Golf Course Environmental Management (GEM) Plan is a required component of the INRMP where golf courses are present on an installation. The GEM plan is prepared under authority of AFI 32-7064 (*Integrated Natural Resources Management*) as implemented by Air Force Policy Directive 32-70 (*Environmental Quality*) and DoD Installation 4715.3 (*Environmental Conservation Program*). Additional governing laws include the Endangered Species Act, Clean Water Act, the Migratory Bird Treaty Act, Executive Order 13123, Clean Air Act, 40 CFR 51.853(b), Clark County Air Quality Regulations, and RCRA/CERCLA .

The U. S. Air Force Golf Course Environmental Management program is a proactive Air Force Center for Engineering & the Environment (AFCEE) initiative to foster a better understanding of the environmental challenges facing our golf courses worldwide. Armed with the support and approval of the Air Force Services Agency golf program, AFCEE's goal is to facilitate the creation of an environmentally friendly golf course facility while supporting the installation mission.

The environmental policy of the Sunrise Vista Golf Course states that: In concert with the Nellis AFB mission, we pledge to employ only those management practices that minimize or eliminate the potential for negative impacts to the environment and the surrounding community, ensure compliance with all appropriate regulations, and to constantly reevaluate our processes to achieve the highest standards of environmental excellence. To accomplish this goal a Golf Course Environmental Baseline Analysis (GCEBA) was conducted on Sunrise Vista Golf course and was given an Environmental Compatibility Quotient (ECQ).

The ECQ compiled for an installation's golf course is a snapshot of the overall performance and compliance with the GEM Plan environmental policy, goals and objectives. One of the important results of the GCEBA process is the identification of significant environmental challenges to be addressed in the GEM Plan. Ideally, the golf staff will address their management approach to each challenge to accomplish course and local community environmental management objectives while still attaining acceptable levels of course playability and customer satisfaction. Along with the baseline analysis, the GEM Plan consists of a description of the final environmental challenges and the prescribed approach to their management.

## **1.0 INTRODUCTION**

### **1.1 Situation**

#### **1.1.1 General**

The U. S. Air Force Golf Course Environmental Management (GEM) program is a proactive Air Force Center for Engineering & the Environment (AFCEE) initiative to foster a better understanding of the environmental challenges facing our golf courses worldwide. Armed with the support and approval of the Air Force Services Agency golf program, AFCEE's goal is to facilitate the creation of an environmentally friendly golf course facility while supporting the installation mission.

#### **1.1.2 Pre-implementation Actions**

There are five steps in the GEM program process: analysis, documentation, implementation, evaluation, and revision (figure 1-1). The primary tenets of the GEM Program are to minimize or eliminate potential negative environmental impacts, attain and maintain daily compliance with all appropriate regulations, and constantly examine all aspects of golf course management to achieve the highest standards of environmental excellence.

#### **1.1.3 Assumptions**

The installation golf and environmental staff will continue to analyze, document, monitor, evaluate, revise, and implement changes. The GEM Plan will be updated annually and revised during INRMP iteration updates.

#### **1.1.4 Legal Considerations**

AFI 32-7064 INRMP requires a GEM Plan.



Figure 1-1: The U.S. Air Force GEM Process is Based on Continual Improvement.

## ***1.2 Mission***

**Sunrise Vista Golf Course Environmental Policy:** In concert with the Nellis AFB mission, we pledge to employ only those management practices that minimize or eliminate the potential for negative impacts to the environment and the surrounding community, ensure compliance with all appropriate regulations, and to constantly reevaluate our processes to achieve the highest standards of environmental excellence.

## ***1.3 Execution***

The implementation of this plan will be the primary responsibility of the Golf Course Services personnel. This group will lead the analysis, documentation, implementation, evaluation, and revision of the goals and objectives of this plan. The Asset Management Flight, Environmental Section, will support the Golf Course personnel to ensure compliance of all applicable environmental laws and regulations, as discussed in chapters 2 and 3.

## ***1.4 Tasks***

1.4.1 The Commander, Force Support Squadron (FSS) will:

1.4.1.1 Through the Community Services Flight, FSCG will:

1.4.1.1.1 Provide GEM Program-specific training to all employees.

1.4.1.1.2 Compile a comprehensive Golf Course Water Resource Management Plan.

1.4.1.1.3 Implement a Water Resource Management Program.

1.4.1.1.4 Develop and implement a Golf Course Water Utilization Plan.

1.4.1.1.5 Establish, document and communicate fertilizer and pesticide application buffers around all water bodies or storm water channels, and minimize discharge of any contaminants.

1.4.1.1.6 Consult with Natural Resources Program Manager on Bird/Wildlife Aircraft Strike Hazard (BASH), Migratory Bird, and Invasive species management issues.

1.4.1.1.7 A representative for the Golf course will attend all NAFB BASH Working Group meetings.

1.4.1.1.8 Regularly check all motorized equipment for poor performance and excessive exhaust emissions.

1.4.1.1.9 Ensure permit conditions are met for both the gasoline and diesel fuel tanks.

1.4.1.1.10 Ensure that Best Available Control Methods are used at all times to minimize dust for any quantity of soil disturbance including traffic on unpaved roads (watering, dust palliative, etc.).

1.4.1.1.11 Consult with Environmental Restoration Program (ERP) manager on activities located near ERP sites.

1.4.2 The Commander, Mission Support Group (MSG) will:

1.4.2.1 Through the Commander, Civil Engineer Squadron will:

1.4.2.1.1 Annually review and update the GEM plan

1.4.2.1.2 Develop and maintain an Urban Forest Management Plan

1.4.2.1.3 Provide environmental training to Golf Course employees

## **2.0 GOLF COURSE DESCRIPTION**

### **2.1 GENERAL DESCRIPTION**

Golf is a very popular sport in the Las Vegas Valley with numerous world class courses and tournaments held here each year. The area receives an average of 4 inches of rain annually and has a growing season of approximately 300 days. The Sunrise Vista Golf Course was designed by Jack Daray, Jr. and Stephen Halsey opening in 1984. The Thunderbird 9 was constructed in 1998.

Sunrise Vista is a 27-hole, 220-acre golf complex located at the south end of the runway bordered by Nellis Boulevard to the west and Cheyenne to the south. Only 140 acres of the property are irrigated and actively managed by the course staff.

The course offers exciting championship golf and can accommodate any level of golfer. The three nine-hole courses are named in honor of planes that have had historic significance to Nellis. The course is decorated with commemorative artifacts that intensify an unmatched golf experience.

The three nine-hole courses are named Eagle, Falcon, and Raptor. A fourth nine hole course, Thunderbird, was recently leased to the City of North Las Vegas to construct a Wastewater Treatment plant. Each combination of nines will play approximately 7,500 yards from the back tees and 6,500 from the middle tees. The forward tees will play anywhere from about 5,400 up to 5,900 yards. The par on each nine hole course is 36. In addition, there is a new clubhouse that greatly improves the customer service of the Sunrise Vista Golf Course.



Figure 2- 1: New Sunrise Vista Clubhouse



Figure 2- 2: Sunrise Vista Golf Course Aerial Photograph.

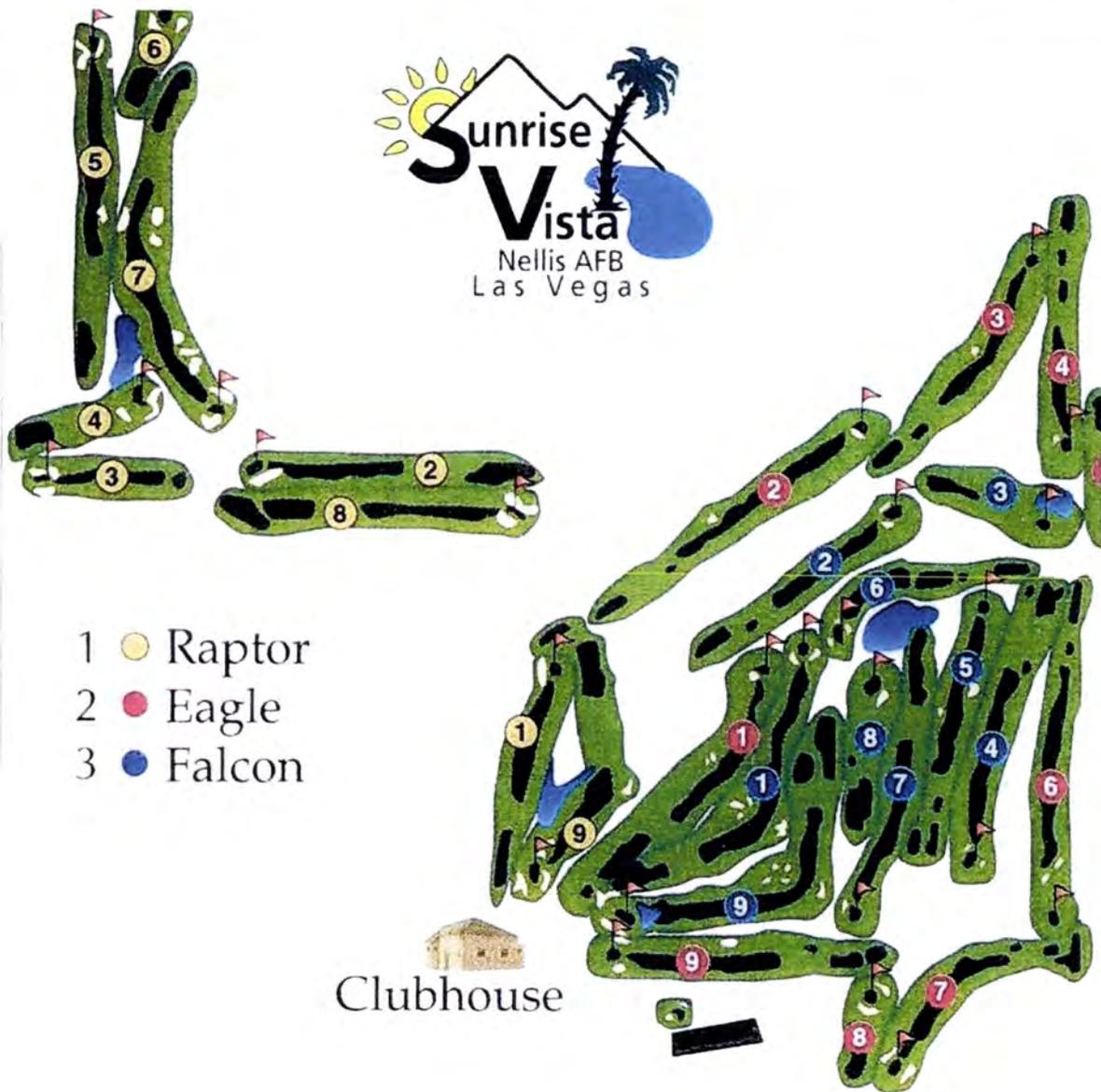


Figure 2- 3: Sunrise Vista Golf Course Layout.

## **2.2 SUNRISE VISTA GOLF COURSE DETAILS**

Architect	Jack Daray, Jr., Stephen Halsey	
Year constructed	1984	
Climate	Hot, dry, windy	
Average annual rainfall	4 inches	
Average growing season	Approx. 300 days per year	
Prevailing wind direction	Northeast/Southwest	
Total facility acreage	260	
Par	36-36-72 & 36-36-72	
Yardage/rating/slope	<i>Raptor/Thunderbird</i>	<i>Eagle/Falcon</i>
	Blue- 6946/72.5/123	Blue- 7051/72.3/121
	White- 6474/70.2/118	White- 6558/70.3/116
	Gold- 6074/67.7/115	Gold- 5611/66.1/106
	Red- 5863/74.2/121	Red- 5444/70.3/113
Turfgrass	Tees	Tifway 419
	Fairways	Tifsport
	Greens	Tifdwarf/Tifgreen
	Roughs	Common Bermuda grass
Irrigation sources	Installation groundwater / treated industrial wastewater	

## **2.3 BASELINE SURVEY**

### **2.3.1 Environmental Compatibility Quotient (ECQ)**

The ECQ compiled for an installation's golf course is a snapshot of the overall performance and compliance with the GEM Plan environmental policy, goals and objectives. There are two measures obtained as a result of using the ECQ checklists to determine the status or quality of the environmental management program: 1) determining the actual and; 2) potential environmental compatibility quotients.

- **Actual ECQ** is the total percentage of "Yes" responses for all ten checklists. This number represents the current level of the golf course management practice compatibility with the environment.

- **Potential ECQ** is the total percentage of "Yes" responses plus the total percentage of "Partial" responses for all ten checklists. The potential ECQ represents a level of compatibility that could be reached by finalizing or fully implementing a particular practice or procedure.

The following is a compilation of the responses in each of the ten ECQ categories. Every ECQ checklists contains ten questions that will measure the relative stewardship of the golf course's management procedures. Each question is answered with a "Yes" for a practice that is complete or ongoing, "Partial" for a practice that has been initiated but needs further attention, and "No" for a practice that is not in place. See Appendix A for the completed ECQ checklists for Sunrise Vista Golf Course.

### ***2.3.2 ECQ Categories***

- Overall Management Philosophy & Documentation
- Safety, Training, and Awareness
- Compliance
- Pesticide Use, Storage, & Handling
- Pollution Prevention
- Conservation Practices
- Water Resources
- Maintenance Practices
- Customer Relations & Education
- Miscellaneous Special Projects & Activities

### 2.3.3 ECQ Scoring Scale

**Table 2-1: Percent of Responses "Yes" or "Partial" per Category Level**

Percentage	Category Level
90 – 100%	Advanced (Green)
70 – 89%	Showing Progress (Yellow)
69% or less	Getting Started (Red)

### 2.3.4 ECQ Scores

The ECQ scores for the Sunrise Vista Golf course are:

- **Actual ECQ: 74 = Showing Progress (Yellow)**

- **Potential ECQ: 85 = Showing Progress (Yellow)**

To view the complete ECQ checklists and scores for the Sunrise Vista Golf Course, see Appendix A. Below is a summary of the ECQ scores for each ECQ category.

**Table 2-2: Summary of ECQ Scores**

#	Environmental Compatibility Quotient	Yes	Partial	No
1	Overall Management Philosophy &	7	2	1
2	Safety, Training, & Awareness	9	0	1
3	Compliance	10	0	0
4	Pesticide Use, Storage, & Handling	9	1	0
5	Pollution Prevention	9	0	1
6	Conservation Practices	6	2	2
7	Water Resources	9	0	1
8	Maintenance Practices	5	3	2
9	Customer Relations & Education	8	0	2
10	Miscellaneous Special Projects & Activities	2	3	5
	<b>Totals</b>	<b>74</b>	<b>11</b>	<b>15</b>

## **3.0 GOLF COURSE ENVIRONMENTAL CHALLENGES**

### **3.1 Environmental Challenges**

One of the important results of the GCEBA process is the identification of significant environmental challenges to be addressed in the GEM Plan. Ideally, the golf staff will address their management approach to each challenge to accomplish course and local community environmental management objectives while still attaining acceptable levels of course playability and customer satisfaction. The GEM Plan consists of a description of the environmental challenges as well as a comprehensive list of future environmental management goals and objectives, and best management practices.

The following potential environmental challenges were identified during the GCEBA process at Sunrise Vista Golf Course in May 02:

- Ecosystem management
- Invasive exotics
- Water use
- Water quality management
- Bird/Wildlife Aircraft Strike Hazard (BASH)
- Threatened & endangered species

During the GEM Plan finalization process, the following environmental challenges were identified for long-term management in June 08:

- Bird/wildlife Aircraft Strike Hazard (BASH)
- Water conservation
- Storm water & floodplain management
- Invasive species
- Migratory birds
- Proposed new clubhouse
- Environmental Restoration Program sites
- Air quality





Figure 3- 2: Canada Geese are frequently observed at the Sunrise Vista Golf Course.

### ***3.2 Bird/wildlife Aircraft Strike Hazard (BASH)***

Sunrise Vista is located at the south end of the runway in the normal approach to Nellis. Bird strikes are low when compared with other bases, but still pose a serious risk to aircraft. Birds, primarily Canada geese and coots are removed on a regular basis. Higher bird populations exist during the winter and migratory bird seasons. Over 100 coots, 40 ducks and 45 Canada geese have been recorded on the golf course during the winter. Bird droppings and grass consumption create obvious playability and health issues to the Sunrise Vista customers.

#### ***3.2.1 Driver/Requirement***

- Nellis AFB Bird/Wildlife Strike Hazard Plan.

### **3.2.2 Objective**

- Maintain constant compliance with all requirements associated with BASH.

### **3.2.3 Management Practice**

- Comply with all airfield management criteria on minimally-maintained areas of the golf course.
- Attend all BASH Working Group meetings.

### **3.2.4 Target**

- Consult and comply with all requirements as directed by airfield manager.



Figure 3- 3: Coots and Canada Geese Dominate the Water Fowl Populations at Nellis AFB.

## **3.3 Water Conservation**

Any state west of the Mississippi regularly contends with adequate water supplies causing many states to restrict water usage. In Nevada and Clark County, where NAFB resides, this issue is the paramount cause of anxiety for planners and managers. Water use on the Sunrise Vista Golf Course has also caused concern. Golf courses are extremely difficult to maintain without a reliable water supply. Water conservation measures are a top priority for Sunrise Vista managers. Water conservation efforts by

the grounds crew has resulted in 200 million gallons of water conserved in the past five years.



Figure 3- 4: Entry Point of Water into the Golf Course Irrigation System Purchased From the City of North Las Vegas.

The golf course irrigation system consists of four wells (#s 11, 12, 13, and 14) which supply five ponds. Water is pumped from the ponds to the irrigation piping and used to water the green and fairways. Additional potable water is purchased at a high price from the City of North Las Vegas as a backup for use only in emergencies.

### ***3.3.1 Driver/Requirement***

- Executive Order 13123

### ***3.3.2 Objective***

- Eliminate all unnecessary uses of water throughout the golf course facility.

### ***3.3.3 Management Practice***

- Implement water conservation management.

### **3.3.4 Target**

- Golf Course staff will implement a water resource management plan.



Figure 3- 5: Water Is the Most Limiting Natural Resource at Sunrise Vista or Any Golf Course.

### **3.4 Storm Water & Floodplain Management**

Sloan Channel carries storm water throughout the base. The channel bisects the entire Sunrise Vista Golf Course. The golf course staff would like to see the areas of channels within the golf course area lined with concrete. Debris causes clogs in the golf cart path crossings through the channels. Paving may help control the amount of debris requiring cleanup and eliminate side channel erosion but it would also speed up the flowing water and cause more erosion downstream of the last concrete paving. Water quality issues associated with storm water runoff are a major concern. The primary areas of concern for the golf course are the application of pesticides, herbicides and fertilizers, along with activities occurring at the Operation and Maintenance (O&M) Compound. Compliance with best management practices will prevent contamination of storm water runoff from the golf course.

### **3.4.1 Driver/Requirement**

- Clean Water Act.

### **3.4.2 Objective**

- Ensure compliance with best management practices in order to prevent contamination of storm water runoff from the golf course.

### **3.4.3 Management Practice**

- Establish, document and communicate fertilizer and pesticide application buffers around all water bodies or storm water channels.
- Minimize the discharge of any contaminants by utilizing following techniques: minimal application techniques, secondary containment for above ground storage tanks, store drum on pallets, and general good housekeeping practices and procedures.

### **3.4.4 Target**

- Implement management practice throughout the golf course facility.

## **3.5 Air Quality**

Clark County is classified as a serious non-attainment area for particulate matter (PM-10) and carbon monoxide (CO) and a moderate non-attainment area for the 8-hour ozone National Ambient Air Quality Standards (NAAQS) (U.S. Environmental Protection Agency [EPA] 2007). NAAQS represent the maximum levels of background pollution that are considered safe, with an adequate margin of safety, to protect the public health and welfare. The NAAQS are located under the Air and Radiation section of the United States Environmental Protection Agency website (<http://www.epa.gov/air/criteria.html>). Areas that do not meet these standards are called non-attainment areas; areas that meet both primary and secondary standards are known as attainment areas. Air emissions from internal combustion engines produce volatile organic compounds (VOCs) and nitrogen oxides (NOx), which are precursor molecules that react with oxygen in the atmosphere to create ozone. Another air quality issue is dust control. Best Available Control Methods must be used at all times for any quantity of soil disturbance including traffic on unpaved roads (watering, dust palliative, etc.) A visible dust plume cannot exit the property or extend over 100 feet within the property boundary. Clark County has established Best Management Practices, found in the Construction Activities Dust Control Handbook. Visit the following website to view the handbook:

### ***3.5.1 Driver/Requirement***

- Clean Air Act
- 40 CFR 51.853(b)
- Clark County Air Quality Regulations

### ***3.5.2 Objective***

- Never unnecessarily contribute to the poor quality air.

### ***3.5.3 Management Practice***

- Continue to regularly check all motorized equipment for poor performance and excessive exhaust emissions.
- Ensure permit conditions are met for both the gasoline and diesel fuel tanks.
- Best Available Control Methods must be used at all times to minimize dust for any quantity of soil disturbance including traffic on unpaved roads (watering, dust palliative, etc.).

### ***3.5.4 Target***

- Maintain full compliance with all permit conditions at all times. Control dust created on the golf course to maintain compliance with county regulations and prevent punitive measures.



Figure 3- 6: Saltcedar Forms a Dense Stand Preventing Errant Shots From Leaving the Golf Course.

### ***3.6 Invasive Species***

Sunrise Vista Golf Course has the largest remaining population of salt cedar (*Tamarix* spp.) on the installation. This plant was originally imported from Eurasia. Salt cedar was planted at the golf course when it was thought to be a beneficial species before scientists learned how destructive the plant was to the environment. Past efforts have reduced the plant's population throughout the installation.

Salt cedar produces seeds throughout its growing season, unlike native plants that produce seeds only for short periods of time. The plant consumes large volumes of groundwater and can use very salty water. Salt cedar acts as a salt pump concentrating salts from deep in the ground onto the soil surface. Over time, salts in the mulch layer kill existing plants and prevent others plant species from germinating. This increases the amount of water needed to irrigate the golf course landscape. In addition, due to high salt concentrations in the soil where the salt cedar grew, the soil needs to be replaced prior to planting.

Removal can be done using appropriated funds, since removal is directed in compliance with Executive Order 13112 which addresses invasive plants.

#### ***3.6.1 Driver/Requirement***

- Executive Order 13423

### **3.6.2 Objective**

- Eliminate all invasive species within the golf course facility property boundaries.

### **3.6.3 Management Practice**

- Continue to consult with installation environmental staff on identifying and eliminate existing invasive species.
- Implement landscape management that eliminates any non-native and potentially invasive species from the golf course.

### **3.6.4 Target**

- Develop and implement an Urban Forest Management Plan as funding allows.



Figure 3- 7: Resident Canada Geese, a BASH Hazard.

### **3.7 Migratory Birds**

The Sunrise Vista Golf Course is home to several birds that are protected by the Migratory Bird Treaty Act. Canada geese, coots, roadrunners, hawks, killdeer, quail, dove, and mallards are among the many species observed during a round of golf. As

natural inhabitants of the region, the beauty and grace of these birds greatly contributes to the overall golfing experience.

One species in particular that contributes to this experience is the western burrowing owl (*Athene cunicularia*). This diminutive species is native to southern Nevada and adapts well to urban environments. Western burrowing owls are protected species in Nevada under state regulations and federally by the Migratory Bird Treaty Act. Burrowing owls live year round on the golf course primarily in the drainage ditches where there are numerous holes in the sides of the channel. The US Fish and Wildlife Service and Red Rock Audubon volunteers annually monitor these owls between March 1 and August 31 each year to document nesting success and burrow selection.

### **3.7.1 Driver/Requirement**

- Migratory Bird Treaty Act.

### **3.7.2 Objective**

- Comply with all Migratory Bird Treaty Act provisions.

### **3.7.3 Management Practice**

- Continue to consult with installation environmental staff.
- Train all employees on this issue to ensure complete compliance.

### **3.7.4 Target**

- Incorporate appropriate consultation and training immediately.



Figure 3- 8: Site LF-01 Abuts the 7th Hole on the Eagle Course.

### ***3.8 Environmental Restoration Program (ERP) Sites***

A portion of the golf course is occupied by an old land fill known as LF-01 which is included in ERP. This site served as the base sanitary landfill between 1942 and 1985. A graded and compacted soil cover/cap was placed over the landfill in 1996. The soil cover/cap remains intact and is covered with vegetation. A No Further Action (NFA) Decision Document for LF-1 was issued under the Administrative Order on Consent (AOC) between Nellis Air Force Base (NAFB) and the Nevada Division of Environmental Protection (NDEP). There is no evidence of any contamination from the old landfill.

#### ***3.8.1 Driver/Requirement***

- RCRA/CERCLA

#### ***3.8.2 Objective***

- Maintain compliance with all requirements or direction from installation environmental staff.

### **3.8.3 Management Practice**

- Continue maintaining the area in accordance with environmental staff direction.

### **3.8.4 Target**

- Maintain compliance with all requirements and direction.

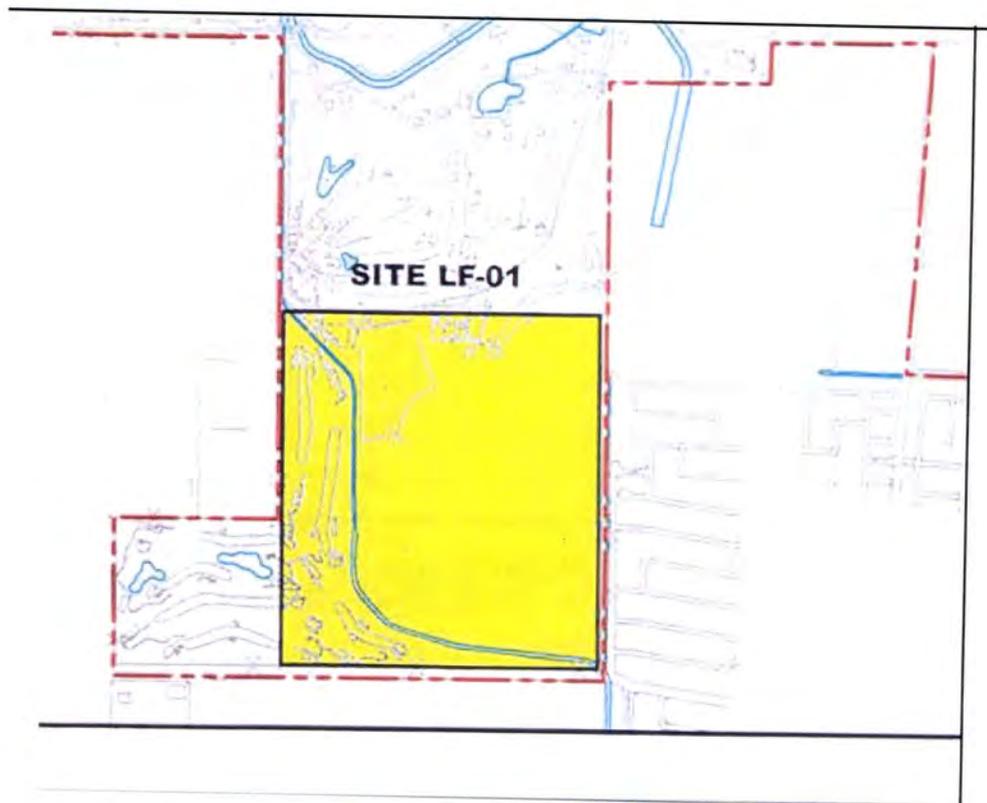


Figure 3-9: Environmental Restoration Program (ERP) Landfill 1 (LF-01).

## ***4.0 PLAN IMPLEMENTATION GOALS AND OBJECTIVES***

### ***4.1 GEM Plan Goals & Objectives***

Current goals and objectives have been divided into short (one year) and long (five year) term targets to correspond with plan update and revision schedules.

#### ***4.1.1 Goals to be accomplished within one year***

- Provide GEM Program-specific training to all employees.
- Regularly communicate and annually evaluate the management approach and status of all environmental challenges identified in this plan.
- Identify, designate and communicate all minimally-maintained areas, water feature buffers, and pesticide or fertilizer application buffers to all pertinent employees.

#### ***4.1.2 Goals to be accomplished prior to the next INRMP update (five year)***

- Secure and utilize a watershed map in daily management of the facility.
- Develop and implement a Water Resource Management Plan for the entire golf course facility.
- Compile an Urban Forest Management Plan that includes an approved BASH compatible plant list.

### ***4.2 Best Practices***

#### ***4.2.1 BASH***

- Comply with all airfield management criteria on minimally-maintained areas of the golf course facility.
- Coordinate and cooperate with the Natural Resources Program Manager and the 57 WG Flight Safety Office to monitor, manage and correct BASH issues as recommended by the Natural Resources Manager.
- A representative of the Golf course will attend all NAFB BASH Working Group meetings.

#### **4.2.2 Water Conservation**

- Implement a Water Resource Management Program to conserve water resources and reduce water consumption.
- Develop a Golf Course Water Utilization Plan and investigate the feasibility of a desert style golf course.

#### **4.2.3 Storm Water and Floodplain Management**

- Application of pesticides, herbicides and fertilizers, along with activities occurring at the operation and maintenance (O&M) compound will comply with all appropriate regulations.
- Establish, document and communicate fertilizer and pesticide application buffers around all water bodies or storm water channels.
- Minimize the discharge of any contaminants by utilizing following techniques: minimal application techniques, covering, secondary containment for above ground storage tanks, drum storage on pallets, and general good housekeeping practices and procedures.

#### **4.2.4 Invasive Species**

- Continue to consult with installation Natural Resources Program Manager on identifying and eliminating existing invasive species in an effective manner to prevent further spread of the invasive species.
- Consult the most current and approved Nellis BASH compatible Plant List during the planning phase of all new landscaping/plantings to ensure that no known invasive plants are purposefully landscaped.

#### **4.2.5 Migratory Birds**

- Continue to consult with Natural Resources Program Manager on issues that involve potential impacts to the local migratory birds.
- Arrange trainings as necessary, through the Natural Resources Program, to inform all employees on Migratory Bird issues and legal protections to ensure understanding and compliance by staff.

#### **4.2.6 ERP Sites**

- Continue maintaining the area in accordance with environmental staff direction.
- Contact environmental staff prior to any activities near or on the ERP site.

#### ***4.2.7 Air Quality***

- Continue to regularly check all motorized equipment for poor performance and excessive exhaust emissions.
- Ensure permit conditions are met for both the gasoline and diesel fuel tanks.
- Best Available Control Methods must be used at all times to minimize dust for any quantity of soil disturbance including traffic on unpaved roads (watering, dust palliative, etc.).

#### ***4.3 Support for GEM Initiatives***

- For additional assistance or more information, please contact:
  - Air Force Center for Engineering and the Environment, Technical Directorate Natural Infrastructure Division
    - GEM Program Manager at 210-536-4995 or DSN 240-4995
- Also questions can be submitted by mail to:
  - AFCEE/TDN, 3300 Sidney Brooks, San Antonio, TX 78235-5112

## **5.0 GEM PLAN BIBLIOGRAPHY**

**Audubon International**, Environmental Performance Audit, *Integrated Environmental Management*, Golf Course Superintendents Association of America, February 2000, New Orleans, LA.

**The Center for Resource Management**, *Golf & the Environment: Charting a sustainable future*. Environmental Principles for Golf Courses in the United States, 1996, Salt Lake City, UT.

**AFCEE/TDN**, *GEM Plan Template*, accessed from AFCEE GEM website.

**Installation staff**, *Site Summary Report of 40-acres of Thunderbird 9 Golf Course*, undated.

**99<sup>th</sup> Civil Engineering Squadron Environmental Management Flight**, *Draft Integrated Natural Resources Management Plan (INRMP)*, May 2007.

**City of North Las Vegas**, *Final Environmental Assessment For Enhanced Use Lease of U.S. Air Force Lands to the City of North Las Vegas for Construction and Operation of a Water Reclamation Facility*, Nellis Air Force Base, Nevada, April 2008.

***Appendix A: ECQ Checklist***

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<b>Overall Management Philosophy &amp; Documentation</b>				
<b>#</b>	<b>Environmental Compatibility Indicator</b>	<b>Yes</b>	<b>Partial</b>	<b>No</b>
1	Has installation environmental and golf management demonstrated that the environment is an important part of their responsibilities by initiating the GEM Planning process?	<input checked="" type="checkbox"/>		
2	Has the golf course adopted and posted an Environmental Policy?	<input checked="" type="checkbox"/>		
3	Is the GEM Plan underway or completed, available, and updated regularly?		<input checked="" type="checkbox"/>	
4	Is a map of the property highlighting identified environmental challenges available, used in the environmental management decision-making process, and is it posted for customers?			<input checked="" type="checkbox"/>
5	Are environmental challenges and their management method, target, and objective, and overall golf course GEM program goals evaluated at least annually and are they regularly communicated to employees, customers, management, and the local community?		<input checked="" type="checkbox"/>	
6	Are written records of water quality monitoring activities, results, and control measures collected and readily available?	<input checked="" type="checkbox"/>		
7	Is there an inventory of bird and mammal species maintained and readily available?	<input checked="" type="checkbox"/>		
8	Is there a general understanding of how course management practices may positively enhance or adversely impact the environment?	<input checked="" type="checkbox"/>		

9	Are the environmental impacts of pest control measures considered prior to their use as part of the course environmental management planning process?	<input checked="" type="checkbox"/>		
10	Are records of pest treatments and their effectiveness maintained and used to guide future pest control decisions?	<input checked="" type="checkbox"/>		
<b>Point totals for each column</b>		<b>7</b>	<b>2</b>	<b>1</b>

### Safety, Training, & Awareness

#	Environmental Compatibility Indicator	Yes	Partial	No
1	Are all golf course employees familiar with the GEM program and are they trained on the importance of environmental compliance with the goals and objectives of the program as it applies to their specific duties?			<input checked="" type="checkbox"/>
2	Are all appropriate employees trained to be familiar with U. S. Air Force, federal, state, and OSHA regulations that apply to the storage, handling, and disposal of all chemicals potentially used on the property?	<input checked="" type="checkbox"/>		
3	Are all employees aware of the potential risks to human health and the environment of chemical use, storage, and disposal?	<input checked="" type="checkbox"/>		
4	Do all appropriate employees receive documented training on practices that may adversely impact worker health, on- and off-site water quality, and wildlife species and their habitats?	<input checked="" type="checkbox"/>		

5	Is a current copy of Material Safety Data Sheets (MSDS) for all chemicals used anywhere on the golf course property maintained and readily available for use by regularly trained employees?	<input checked="" type="checkbox"/>		
6	Do all employees receive regular, documented training on all potential OSHA issues associated with their specific duties?	<input checked="" type="checkbox"/>		
7	Are all golf course pesticide applicators active participants in a respiratory and/or pulmonary testing program?	<input checked="" type="checkbox"/>		
8	Are all pesticides, fertilizers, and other chemicals stored on appropriate shelving in an approved storage facility?	<input checked="" type="checkbox"/>		
9	Are golfers notified in the pro shop and on the first and tenth tees about the planned or recently completed spraying of any chemical or fertilizer that may potentially be hazardous to human health or general public safety?	<input checked="" type="checkbox"/>		
10	Are key staff members trained regarding water quality and conservation issues pertinent to the course and their particular duties?	<input checked="" type="checkbox"/>		
	<b>Point totals for each column</b>	<b>9</b>	<b>0</b>	<b>1</b>

<b>Pesticide Use, Storage, &amp; Handling</b>				
<b>#</b>	<b>Environmental Compatibility Indicator</b>	<b>Yes</b>	<b>Partial</b>	<b>No</b>
1	Are there trained scouts on staff other than the superintendent to monitor turf and plant pest populations that notify management and include findings into a report or guide for future use?	<input checked="" type="checkbox"/>		
2	Are there written pest profiles of common pest species with a variety of potential control measures including cultural, biological, physical, and mechanical controls prior to treating the problem on the course?	<input checked="" type="checkbox"/>		
3	Are there established, documented, and utilized aesthetic and functional thresholds for effective management of pests that may also reduce chemical use?	<input checked="" type="checkbox"/>		
4	Is there a specially designed pesticide mixing area where all mixing is performed by appropriately trained personnel?	<input checked="" type="checkbox"/>		
5	Has a current list of all pesticides and other chemicals stored or used at the golf facility recently been provided to the appropriate Fire Department(s)?	<input checked="" type="checkbox"/>		
6	Is there a written, readily available, and regularly updated Integrated Pest Management Plan for the entire golf course facility?	<input checked="" type="checkbox"/>		
7	If personal protective equipment is required for pesticide use, storage, or handling, is it available for use by trained individuals?	<input checked="" type="checkbox"/>		

8	<p>Are written and readily available records maintained of all applications of pesticides made by certified applicators, including the following?</p> <p>the quantity of each pesticide used;</p> <p>the chemical or common name of the active pesticide ingredient(s);</p> <p>the pest or purpose for which the pesticide was applied; and the date and place of application</p>	<input checked="" type="checkbox"/>		
9	Is the chemical storage structure/area well ventilated, fire resistant, and locked with access limited to select personnel?	<input checked="" type="checkbox"/>		
10	Are there designated and documented "no spray" areas around pond, river, stream, or lake edges and have they been communicated to pesticide applicators?	<input checked="" type="checkbox"/>		
<b>Point totals for each column</b>		<b>10</b>	<b>0</b>	<b>0</b>

<b>Compliance</b>				
#	Environmental Compatibility Indicator	Yes	Partial	No
1	Are the fuel storage/delivery area and associated equipment managed in accordance with federal, state, and local regulations?	<input checked="" type="checkbox"/>		
2	Are installation environmental staff members regularly consulted on pertinent course management discussions and plans?	<input checked="" type="checkbox"/>		
3	Are there golf course staff meetings where environmental management issues are regularly discussed with all employees?	<input checked="" type="checkbox"/>		

4	Do the director of golf and the superintendent attend all internal and external ESOHCAMP in-briefings and out-briefings?	<input checked="" type="checkbox"/>		
5	Do the director of golf and/or the superintendent coordinate their input on the various management plans that affect or include the golf course with installation environmental staff?	<input checked="" type="checkbox"/>		
6	Have all environmental challenges been physically identified and mapped to aid the golf staff's daily management efforts?		<input checked="" type="checkbox"/>	
7	Has appropriate impact analysis (NEPA) been performed on all proposed actions on or affecting the golf course property?	<input checked="" type="checkbox"/>		
8	Are oil containers used to collect old oil in good condition and correctly labeled?	<input checked="" type="checkbox"/>		
9	Has the golf course staff assisted the installation environmental staff with the required Golf course Environmental Management Plan requirements?	<input checked="" type="checkbox"/>		
10	Were there less than two major golf course facility-related findings during the last official ESOHCAMP visit?	<input checked="" type="checkbox"/>		
	<b>Point totals for each column</b>	<b>9</b>	<b>1</b>	<b>0</b>

<b>Pollution Prevention</b>				
<b>#</b>	<b>Environmental Compatibility Indicator</b>	<b>Yes</b>	<b>Partial</b>	<b>No</b>
1	Are there designated and documented "minimally maintained" or natural vegetative buffer areas around pond, river, stream, or lake edges and have they been communicated to mower operators and pesticide applicators?	<input checked="" type="checkbox"/>		
2	Is there a readily available copy of the Installation Spill Plan that includes the golf course facility and is there a spill containment kit at each required location with spill containment procedures in place?	<input checked="" type="checkbox"/>		
3	Does the chemical storage area have a sealed metal or concrete floor and are all liquid pesticides handled over an impermeable surface?	<input checked="" type="checkbox"/>		
4	Does the chemical storage area have a lip along the edges to contain spills?	<input checked="" type="checkbox"/>		
5	Are liquid products stored below dry products and are dry materials stored on appropriate pallets or shelves to keep them off the floor?	<input checked="" type="checkbox"/>		
6	Do all golf facility employees regularly receive documented and approved HAZCOM and safety and health training?	<input checked="" type="checkbox"/>		
7	Are grass clippings removed from equipment with compressed air instead of or prior to washing?	<input checked="" type="checkbox"/>		
8	Are gasoline, motor oil, brake and transmission fluid, solvents, and other chemicals used to operate or maintain equipment and vehicles prevented from directly or indirectly entering water bodies?	<input checked="" type="checkbox"/>		

9	Has the watershed in which the course resides and contributes runoff to been identified and mapped to aid the golf course staff?			<input checked="" type="checkbox"/>
10	Are appropriate quantities of fertilizers applied during weather conducive to reducing the potential for leaching and runoff?	<input checked="" type="checkbox"/>		
<b>Point totals for each column</b>		<b>9</b>	<b>0</b>	<b>1</b>

<b>Conservation Practices</b>				
#	Environmental Compatibility Indicator	Yes	Partial	No
1	Are recycling containers conveniently provided for customer and employee use throughout the golf course facility?		<input checked="" type="checkbox"/>	
2	Are there appropriately designated and mapped minimally maintained areas on the golf course facility grounds?		<input checked="" type="checkbox"/>	
3	Has the irrigation system or its components recently been upgraded to reduce inefficiency, malfunction, and overall water use?			<input checked="" type="checkbox"/>
4	Has all "non-target" irrigation (ponds, natural, or out of play areas, etc.) been eliminated or minimized?	<input checked="" type="checkbox"/>		
5	Have irrigation system flow meters been installed to monitor water use and detect potential waste?	<input checked="" type="checkbox"/>		
6	Has the entire golf course facility property been examined for landfills, critical habitats, threatened or endangered species, wetlands, floodplains, and historical/cultural resources or other environmentally sensitive features?	<input checked="" type="checkbox"/>		

7	Are employees encouraged to minimize their trips around the course to conserve on the use of fossil fuels and minimize potentially harmful exhaust emissions?	<input checked="" type="checkbox"/>		
8	Do the restaurant and/or snack bar utilize reusable plates and silverware for use by customers throughout the facility's operating hours?			<input checked="" type="checkbox"/>
9	Have the annual maintenance practices for the officially designated "minimally-maintained" or natural areas been coordinated with the installation Bird/Wildlife Aircraft Strike Hazard (BASH) officer and installation environmental management personnel?	<input checked="" type="checkbox"/>		
10	Are all motorized golf course equipment regularly checked for excessive air polluting emissions?	<input checked="" type="checkbox"/>		
<b>Point totals for each column</b>		<b>6</b>	<b>2</b>	<b>2</b>

### Water Resources

#	Environmental Compatibility Indicator	Yes	Partial	No
1	Are water features regularly monitored for algae, erosion, excessive aquatic plant growth, fish kills, and sedimentation?	<input checked="" type="checkbox"/>		
2	Are equipment wash or wastewater kept from directly entering surface water and are they recycled or allowed to filter through a vegetative area?	<input checked="" type="checkbox"/>		
3	Are outdoor irrigation of non-golf course landscape areas regularly monitored and maintained for leaks and efficient performance?	<input checked="" type="checkbox"/>		

4	Has the golf course staff coordinated with the installation's environmental staff on potential storm water management planning requirements?	<input checked="" type="checkbox"/>		
5	Have part circle irrigation heads been installed where possible to preserve water resources and reduce maintenance while minimizing potential negative impacts to surrounding minimally maintained, natural, or water feature areas?	<input checked="" type="checkbox"/>		
6	Are all water feature maintenance tasks coordinated with the installation Bird/Wildlife Aircraft Strike Hazard (BASH) officer and installation environmental management personnel?	<input checked="" type="checkbox"/>		
7	Has the irrigation system been completely checked for proper water distribution in all irrigated areas and are water leaks fixed in a timely manner?	<input checked="" type="checkbox"/>		
8	Are moving water bodies that pass through the golf course such as streams or creeks regularly monitored both upstream and downstream of the course for overall water quality?	<input checked="" type="checkbox"/>		
9	Does the facility have an approved written and readily available Drought Management Plan if, or when irrigation restrictions may be required by the community or the installation?	<input checked="" type="checkbox"/>		
10	Is there a comprehensive, up to date, and readily available written Water Feature Management Plan for the entire golf course facility?			<input checked="" type="checkbox"/>
<b>Point totals for each column</b>		<b>9</b>	<b>0</b>	<b>1</b>

<b>Maintenance Practices</b>				
<b>#</b>	<b>Environmental Compatibility Indicator</b>	<b>Yes</b>	<b>Partial</b>	<b>No</b>
1	Is there a written, regularly updated, and readily available Golf Course Maintenance Plan?		<input checked="" type="checkbox"/>	
2	Does the Maintenance Plan include individual plans such as Integrated Pest Management, Tree Management, and Hazard Communication?		<input checked="" type="checkbox"/>	
3	Are green, tee, and fairway mowing heights maintained at reasonable levels that do not unduly stressing turf or requiring additional chemical inputs?	<input checked="" type="checkbox"/>		
4	Are there regular and documented procedures in place to continually improve overall course soil health such as topdressing, organic amendments, aeration, and drainage improvements?		<input checked="" type="checkbox"/>	
5	Is there an up to date and readily-available map of the course's "hot spots", or those areas requiring special care or regular attention?			<input checked="" type="checkbox"/>
6	Is all maintenance equipment maintained and cleaned in a manner that minimizes or eliminates the potential for spreading of pest or disease contamination?	<input checked="" type="checkbox"/>		
7	Has there been a complete examination of all aspects of the golf course facility operation (including the snack bar and grill, clubhouse, pro shop, cart storage facility, and maintenance complex) for potential negative environmental impacts?	<input checked="" type="checkbox"/>		
8	Is contour mowing used to conserve fuel and increase playability and aesthetics?	<input checked="" type="checkbox"/>		

9	Have all playing surfaces been inventoried and mapped for potentially agronomically challenging soil types?			<input checked="" type="checkbox"/>
10	Are soil tests and plant tissue analysis used to determine nutritional requirements?	<input checked="" type="checkbox"/>		
	<b>Point totals for each column</b>	<b>5</b>	<b>3</b>	<b>2</b>

<b>Customer Relations &amp; Education</b>				
#	Environmental Compatibility Indicator	Yes	Partial	No
1	Are the course manager and superintendent involved in an on-going and documented customer environmental management educational program?			<input checked="" type="checkbox"/>
2	Is there a highly visible location at the course or clubhouse where golf course environmental management notices and informational messages are regularly posted for the education and enjoyment of customers?	<input checked="" type="checkbox"/>		
3	Do the course manager and superintendent actively communicate with customers to determine their points of view?	<input checked="" type="checkbox"/>		
4	Is there documented, regular communication by course management with installation civil engineering, environmental, and leadership on GEM program issues or concerns?	<input checked="" type="checkbox"/>		
5	Does the golf staff regularly survey their customers on how they rate the various elements of the golf course facility?	<input checked="" type="checkbox"/>		
6	Is there consistent and attractive signage around the course and grounds that would increase the			<input checked="" type="checkbox"/>

	awareness of the average golfer to the environmental management practices employed?			
7	Are there signs appropriately located to warn golfers of hazards around or near recycled or otherwise non-potable water?	<input checked="" type="checkbox"/>		
8	If applicable, have areas of the course been designated "Environmentally Sensitive Zones" per USGA rules?	<input checked="" type="checkbox"/>		
9	Are course staff members regularly trained on how to improve their dealings with customers?	<input checked="" type="checkbox"/>		
10	Are there clinics provided to teach beginning golfers the basics of the game to include the rules as well as the environmental challenges faced by the golf staff at their facility?	<input checked="" type="checkbox"/>		
<b>Point totals for each column</b>		<b>8</b>	<b>0</b>	<b>2</b>

<b>Miscellaneous Special Projects &amp; Activities</b>				
#	Environmental Compatibility Indicator	Yes	Partial	No
1	Are there projects planned and funded for execution in the near future that would demonstrate the compatibility of the course's management methods with GEM program initiatives?		<input checked="" type="checkbox"/>	
2	Are there projects planned and funded to reduce the course's potential negative environmental impacts?		<input checked="" type="checkbox"/>	
3	Are there tournaments or other events planned that may educate customers on the environmental challenges faced by the golf staff?			<input checked="" type="checkbox"/>

4	Are there regular field trips hosted at the course for local students or other community groups?			<input checked="" type="checkbox"/>
5	Are there projects planned to eliminate or minimize a potential erosion problem?			<input checked="" type="checkbox"/>
6	Does the course have a native tree installation program complete with planting plan and maintenance schedule?			<input checked="" type="checkbox"/>
7	Are any of the local schools or universities involved in educational or research activities at your course?	<input checked="" type="checkbox"/>		
8	Are there special facility-wide recycling programs underway?		<input checked="" type="checkbox"/>	
9	Is your course an active participant in the USAF Golf Environmental Management Program?	<input checked="" type="checkbox"/>		
10	Has your facility been nominated by your MAJCOM for the golf course environmental management award in the last 3 years?			<input checked="" type="checkbox"/>
	<b>Point totals for each column</b>	<b>2</b>	<b>3</b>	<b>5</b>