AUDIT QUESTIONS	RESPONSES
This questionnaire is intended to be a tool to draft facility-specific permit language. The questionnaire may also be used to identify whether current operations meet the conditions of the permit and the intent of the MS4 permitting program. Where existing operations meet the intent of the MS4 permitting program, these can be added as permit conditions, so compliance can be more readily demonstrated for enforcement inspectors. GENERAL QUESTIONS	
1. What is the name and mission of your facility?	Buckley Air Force Base (Buckley AFB) is an Air Force Space Command base. During 2000 base-operating responsibilities changed from the Colorado Air National Guard (COANG) to the U.S. Air Force (USAF) and ultimately the 460th Space Wing (460 SW) became the host unit at Buckley AFB. The 460 SW's mission is to provide combatant commanders with expeditionary warrior Airmen, and deliver global infrared surveillance, tracking, and missile warning for theater and homeland defense. Also, the 460 SW provides infrastructure and organizational support for approximately 77 tenant organizations who have facilities and operations located on Buckley AFB including the 140th Wing (140 WG) of the COANG, the Colorado Army National Guard (COARNG), the Navy Operational Support Center, Marines Corps, and Coast Guard, and reserve components of these forces. The COANG 140 WG's state mission is to provide protection of life, property and preserve peace, order and public safety. These missions are accomplished through emergency relief support during natural disasters such as floods, earthquakes and forest fires; search and rescue operations; support to civil defense authorities; maintenance of vital public services and counterdrug operations. Its federal mission is to maintain well-trained, well-equipped units available for prompt mobilization during war and provide assistance during national emergencies (such as natural disasters or civil disturbances).

AUDIT QUESTIONS	RESPONSES
	The COARNG operates the Army Aviation Support Facility (AASF) and is responsible for supplying personnel and equipment for special missions that cannot be handled by ground units alone. The mission of the AASF is to train aircrew to support their wartime and state missions, maintain mission-ready aircraft, and to rapidly respond to state emergencies.
Are there any support facilities associated with your facility, and if so, where are these located and what is the purpose of these facilities?	The state of the s
What types of activities occur and approximately many people live/work there?	Buckley AFB hosts a variety of activities through the 460 Space Wing and its tenants, including airfield operations, administrative/office functions, retail/commercial, vehicle maintenance, public works, and recreation and open space. Buckley AFB serves more than 92,500 active duty, National Guard, Reserve, and retired personnel throughout the Front Range community. This includes 2,700 active duty members from every service, 4,200 National Guard personnel and Reservists, 3,000 civilians, contractors, retirees and dependents. The number of personnel living on Buckley AFB fluctuates, with about 350 in two dormitories and an ever-changing number in a 353-unit housing area.
Are there plans to expand the facility to include more people and/or more activities?	Yes.
2. Are there any data related to the permeability of soils? If so, can these data be provided to evaluate whether infiltration of stormwater runoff is a viable option?	Yes, the major soil-mapping units present on Buckley AFB include the Fondis-Weld, Alluvial Land-Nunn, and Renohill-Buick-Litle associations (USDA, SCS 1971). The Fondis-Weld association, composed of the Fondis and Weld soil series, covers the most surface area at Buckley AFB. The Fondis soils are moderately slow permeability (< 0.63 inches per hour). The Alluvial Land-Nunn association consists of soils that have moderate permeability (0.63 inches per

AUDIT QUESTIONS	RESPONSES
	hour. The most common soil series within the Renohill-Buick-Litle association are the Renohill-Litle complex and the Renohill-Buick loam. Renohill soils are characterized as moderately slow to slow permeability (less than 0.63 inches per hour).
3. What is/are the receiving water(s) from the facility outfalls and what types of activities occur upstream of the facility which may impact water quality? Output Description:	All surface water runoff on Buckley AFB is intermittent and occurs only in response to precipitation events. This runoff is controlled and managed on base by the Buckley AFB stormwater drainage system, a man-made system covered under Buckley AFB's MS4 permit. Runoff from facilities on Base discharges into this MS4 system and discharges at outfalls into natural drainage channel receiving waters. The receiving waters, also intermittent drainages, are East Toll Gate Creek (a natural drainage channel and waters of the US) and Granby Ditch (a natural channel, largely improved by man, and a component of the City of Aurora's MS4 drainage system). However, construction in the City of Aurora appears to be moving East Toll Gate Creek toward more perennial flow. Based on topography, surface water drainage from roughly the eastern side of the Base is via either an unnamed tributary to Murphy Creek, or an unnamed tributary to Sand Creek; however, this part of the Base is well vegetated, most runoff occurs as overland flows, and therefore actual runoff discharges at outfalls are believed to be rare and none have been documented.
	Surface drainage from Buckley AFB and the surrounding area is generally from southeast to northwest. Sand Creek, the primary surface drainage feature in the area, is located to the north-northeast of the base; Murphy Creek is tributary to Sand Creek. East Toll Gate Creek crosses the southern part of the base and is tributary to Toll Gate Creek about 1.4 miles to the northwest, at its confluence with West Toll Gate Creek. Toll Gate Creek is tributary to Sand Creek where it joins about 3.3 miles further downstream, southwest of the I-225 and I-70 interchange. Sand Creek is tributary to the South Platte River approximately 12 miles northwest of Buckley AFB. This portion of the South Platte is designated as the U.S. Geological Survey's (USGS's) watershed Middle South Platte-Cherry Creek with hydrologic unit code 10190003. The named drainages are all

AUDIT QUESTIONS	RESPONSES
	classified as waters of the United States.
	East Toll Gate Creek is the only receiving water or drainage basin that has any drainage area occurring upstream of the Base, so activities which may impact water quality entering the Base are limited to this drainage. The total area of the East Toll Gate Creek drainage basin is 11.1 square miles (7,100 acres) (Kiowa
	2006). The part of the East Toll Gate Creek drainage basin located on Buckley AFB is about 20 percent of the entire basin. The upstream drainage area, which enters (runs onto) the Base at two points along the southern boundary, is about
·	40 percent of the entire basin, or twice the size of the on-base drainage area. Therefore, a significant volume of runoff flows onto the Base in response to major precipitation events. The upstream drainage area, located within the limits of the City of Aurora and in unincorporated Arapahoe County, is partially
	developed with several commercial and residential developments currently under construction.
4. Are there any impaired waters within the facility	East Toll Gate Creek (a receiving water as described in response to question #3),
boundary or immediately upstream or downstream of the	located both immediately upstream and downstream of the Base, is designated
facility? If so, what are the pollutants of concern?	by the State of Colorado as impaired, as follows:
	WBID: COSPUS16c,
	Segment Description: Tributaries to S. Platte River, Chatfield Reservoir to
	Big Dry Creek except specific listings,
•	Portion: East Toll Gate Creek, West Toll Gate Creek, Toll Gate Creek,
•	Pollutant of concern: Selenium.
	In addition, Sand Creek, which is a possible receiving water (see response to
	question #3) downstream of the Base, is designated as impaired by the State of
	Colorado, as follows:
	WBID: COSPUS16a,
	Segment Description: Sand Creek,
	Portion: all, Pollutants of concern: Selenium and Escherichia Coli (E.coli).
	Fundants of concern. Selemum and Escherichta Con (E.con).

A	UDIT QUESTIONS	RESPONSES
5.	Are there any TMDLs in place for waters within the facility boundary or immediately downstream? If so, are there any wasteload allocations for stormwater within the TMDL?	There are no TMDLs in place for waters on Base or immediately downstream.
6.	What types of endangered species and historic properties are on the facility property which could be affected by development and industrial activity? What is the general plan or process on how impacts to historic properties and endangered species are evaluated when new construction is proposed?	No species that are federally-listed as endangered or threatened ("listed") under the Endangered Species Act (ESA) have been found or are expected to be present on Buckley AFB. According to the U.S. Fish & Wildlife Service there is no critical habitat designated on or near Buckley AFB. Therefore, plans to address impacts from stormwater discharges are not applicable. The burrowing owl is a state species of concern.
		Numerous surveys, studies, and inventories have been conducted on Buckley AFB to identify historic or cultural features, sites or items. Six buildings, which date to the Cold War era, have been determined by Buckley AFB, with the concurrence of the Colorado State Historic Preservation Office, to be individually eligible for the National Register of Historic Places (NRHP). These buildings are two hangars and the exteriors of four of the radomes. No archaeological sites eligible for inclusion in the NRHP have been identified on Buckley AFB and no Indian sacred sites, traditional cultural properties, Native American human remains, or cultural items have been identified, or inadvertently discovered or reported on Buckley AFB.
		The Integrated Cultural Resources Management Plan (ICRMP) for Buckley AFB provides guidance and establishes standard operating procedures for the management of culturally significant resources on the base. The ICRMP contains compliance procedures including Native American concerns, consultation procedures, and Section 106 review guidelines. The ICRMP is consulted prior to any proposed project to ensure that there are no new cultural resources constraints associated with a proposed action.

A	UDIT QUESTIONS	<u>RESPONSES</u>
<u>S7</u>	ORMWATER MANAGEMENT PLAN	
1.	Does your written stormwater management plan include specific milestones and quantities for each program/BMP?	Yes
2.	Describe how your SWMP is coordinated across departments.	The 460 Civil Engineer Squadron, Environmental Flight (460 CES/CEV) is the SWMP lead and coordinates with other 460 SW groups/flights on an as-needed basis by directly contacting personnel who are involved with the activity of interest, e.g., street maintenance. Planning or scheduling work tasks is handled by the flight chief or designee responsible for activity. Many of the responsible entities for implementation are within the 460 CES.
3.	Are there any impaired waters, pollutants of concern and TMDLs for the waterbodies you discharge to? Does your SWMP include programs or BMPs specifically addressing these impairments?	Yes, there are impaired waters for selenium as described in response to General Questions 4 and 5 above. No.
4.	Describe how you evaluate the success of your stormwater management program.	Program success is evaluated based on meeting the measurable goals identified for the BMPs in the SWMP.
In	formation for Review:	
1.	Stormwater management plan document	Copy provided separately.
2.	Most recent annual report	Submitted to Region 8 in June 2009
3.	Organizational chart showing departments with stormwater responsibilities	None available
PU	BLIC EDUCATION AND PARTICIPATION	
1.	Describe the overall approach to educating the public on stormwater issues.	Providing brochures, articles, flyers, and similar materials describing stormwater pollutants and concerns at key events such as Earth Day or Community Advisory Group meetings.

A	UDIT QUESTIONS	RESPONSES
2.	What are the primary pollutants or behaviors you target with your public education program?	Household wastes (e.g., garbage, trash, recyclables, yard wastes, leaves, grass clippings, pet wastes, lawn and garden chemicals) and proper disposal practices, automobile fluids (oil, antifreeze, brake fluid, gasoline) and maintenance practices, litter and proper disposal practices.
3.	Describe your top three target audiences and the messages you plan to deliver.	 Base residents in housing and dormitories; Shoppers utilizing support facilities including the base exchange, commissary, car wash, and gas station; and Military and civilian populations working on Base. Messages include household wastes and proper disposal practices and automobile fluids and maintenance practices for #1; and litter and proper disposal practices for #2 and #3.
	How do they relate to the primary pollutants or behaviors?	See response to #2 above.
4.	How do you evaluate the effectiveness of your outreach activities?	Effectiveness is evaluated based on meeting the measurable goals identified for the BMPs in the SWMP.
	Have you conducted any public awareness surveys?	No.
In	formation for Review (where applicable):	
1.	Public outreach strategy	Included in the SWMP
	Results of any public awareness surveys	None available
3.	Information tracking the distribution of outreach materials	Included in the SWMP
M	S4 MAINTENANCE ACTIVITIES	•
1.	Describe your current MS4 mapping resources (e.g., has the permittee mapped storm drains, outfalls, inlets, municipal facilities, etc.).	The Base has geographic information system (GIS) based maps (GeoBase) that show the stormwater drainage system components including component metadata such as size, length, material type. Also, each component has a unique identification designation.

<u>A</u>	UDIT QUESTIONS	RESPONSES
2.	Describe your procedures for catch basin cleaning, street sweeping and MS4 maintenance.	The recurring work program (RWP) managed by the 460 Civil Engineer Squadron, Operations Flight (460 CES/CEO) includes activities such as catch basin cleaning and street sweeping. The recurring work program automatically schedules and tracks these activities.
3.	Do your municipal facilities have SWPPPs? If not, why?	There are no separate SWPPPs under the MS4 permit.
4.	How are maintenance staff trained with respect to stormwater activities and BMPs?	Training is provided on both construction and industrial stormwater concerns and permit requirements including BMPs installation and maintenance. In general training is provided quarterly, and attendance is tracked so each person attends at least once per year.
In	formation for Review (where applicable):	
i.	Catch basin cleaning records for the month of, or other applicable records (e.g., billing hours for specific activities).	
2.	Stormwater plan or SWPPP for main municipal maintenance facility (including any self-inspection records)	Not applicable
3.	Standard Operating Procedures (SOPs) for stormwater- related maintenance activities	

<u>C</u> (CONSTRUCTION ACTIVITIES	
1.	Describe your legal authority to require erosion and sediment control BMPs and enforce stormwater requirements.	Air Force Instruction (AFI) 32-7-041 (which states at the very beginning: "Compliance with this publication is mandatory") states each "installation commander willEnsure that the installation water quality program is managed in accordance with all applicable Federal, state, and local requirements."
,		For construction projects, the legal authority to require and enforce stormwater controls is incorporated in the project contract between the government proponent organization, i.e., owner, and the contractor. Virtually all contracts contain "must comply with all federal, state, and local regulations" clauses.
2.	Describe your system for tracking construction plans, active construction projects, inspections, and enforcement actions (including the number of projects disturbing greater than one acre last year).	A timeline-type format document, annotated with the activity status, permit status, and inspections is maintained for each project as the means of tracking. During MS4 Permit Year 5 (11 Mar 07 – 10 Mar 08), construction stormwater permit compliance inspections were conducted on 23 projects that were one acre or greater in size.
3.	Describe the types of construction projects which occur at the facility and the difference in maintaining stormwater controls between projects contracted and projects built using facility staff.	The types of construction projects on Buckley AFB involving earth disturbing activity include: new structures (office buildings, hangars, etc); new and repair/maintenance of parking lots; new and repair/maintenance of roads/streets; new and repair/maintenance/replacement of utilities (electrical, communications, gas, water supply, sanitary sewer, storm sewer), new recreation facilities (baseball field, running track, running trail, volleyball court, children playground), and erosion control/revegetation/stabilization. Most projects are constructed by contractors rather than installation personnel and the contractor is responsible for maintaining stormwater controls until final stabilization of the site is achieved and the site accepted by the 460 SW.
4.	How do you coordinate implementation of your local erosion and sediment control requirements with EPA's NPDES construction general permit requirements?	The erosion and sediment control requirements on Buckley AFB are the same or more stringent as the EPA's NPDES construction general permit requirements.
5.	Describe your process for reviewing plans to ensure stormwater BMPs are addressed.	Personnel in the 460 CES/CEV are members of the project design review group that is notified when design plans are submitted for review and comment, which typically occurs at more than one stage in the design process (e.g., 35%, 65%,

and 100% complete). The plans are reviewed for compliance with various ronmental regulations including construction stormwater permit irements such as construction phase BMPs. Some contracting entities and stormwater requirements as "performance based" activities in the ract. In those instances, the SWPPP is developed after the project is gned by the actual contractor performing the construction. 460 CES/CEV ews virtually all SWPPPs regardless of the contracting entity.
meter run off, perimeter run on, inlet, outlet (discharge), laydown, vehicle cing, and good housekeeping types. For usual or common situations, it is erable to indicate construction phase BMPs by function or purpose, rather a specific type, i.e., silt fence. Then the contractor has the flexibility to ify the type when they prepare the SWPPP. However, if unusual, critical or itive situations are present, then indicating a specific BMP is preferred.
ddition to BMPs shown on the plans, the reviewer also looks for note(s) cating the project requires a construction stormwater permit that includes aration of a SWPPP, application for an NOI, implementation of the SWPPP, atenance of BMPs, site inspections, stabilization of all disturbed areas, and inuation of the permit until final stabilization is achieved.
tracts are written and administered through the government proponent nization and their contracting officer (CO), representative (COR), and/or a gnee. The government proponent on a construction project is commonly the SW, USACE, AFCEE, COANG, or COARNG. Requirements to address mwater runoff are addressed in the design standard specifications used by corganizations, which in nearly all instances specifies that the contractor is onsible for compliance with the construction general permit. Only a CO or can direct the contractor; so compliance inspection report findings, nely issued to project manager(s), are forwarded to a CO or COR if they ant an enforcement-type action or response.
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7. Interview an inspector to assess how stormwater inspections are conducted at construction sites. Ask about the frequency of inspections and the number of inspectors.	
8. Describe the most recent training attended by inspectors and plan review staff	Training on construction stormwater permit compliance is offered by the 460CES/CEV for all contractors, project managers, and other interested/associated personnel on a quarterly basis; personnel are required to attend at least initially when new to working on the base and encouraged to attend semi-annually thereafter. During CY 2009, CES/CEV sponsored a Red Rocks Community College-level construction stormwater management class attended by 45 personnel consisting of military, civilian and contractors working on the installation. In addition, CEV has made available the opportunity for the Engineering Flight project managers to attend the Red Rocks course itself during either August or September 2009.
Potential information to review (where applicable):	
List of active construction projects disturbing greater than one acre for the month of	
Erosion and sediment control plan reviewed and approved by permittee (selected from list)	Copy provided separately – see annual report
Inspection reports for a selected project (including any enforcement actions for noncompliance)	

. Describe your post-construction design standards and	The Buckley AFB Facilities Excellence Plan (Dec 2007) includes stormwater
legal authority.	post-construction design standards and guidelines as follows:
	 Landscaping including revegetation seed mixes.
	 Stormwater runoff volumes and velocities at new development sites shall be as close as practical to predevelopment values.
	 BMPs utilized during post-construction phases shall refer to the City of Aurora Drainage Criteria Manual, Urban Drainage and Flood Control
	District (UDFCD) volumes, and Unified Facilities Criteria (UFC)
•	3-210-10, Design: Low-Impact Development Manual.
	Generally, the legal authority to require or enforce post-construction design standards is incorporated in the project contract. For projects on which the 460 SW is the government proponent organization, the 460th Contracting Squadror (460 CONS) directs the contractor. For projects on which the government proponent organization is other than the 460 SW (e.g., US Army Corps of Engineers), the 460 SW has no authority to insert itself in the administration of contract. However, as the host and owner of the installation, the 460 SW, can in necessary direct non-460 SW project proponents, as described in each interservice support agreement.
 Describe your process for reviewing plans to ensure post-construction BMPs are addressed. 	Plans are reviewed for compliance with construction stormwater permit requirements including post-construction phase BMPs, as part of the construction phase review described in response to Construction Activities question #5.
Do plan reviewers use checklists to ensure consistent plan review?	No.

3.	Describe your post-construction operation and maintenance (O&M) program (including your inventory of post-construction BMPs and your inspection and maintenance schedule).	The operation and maintenance program for post-construction BMPs is incorporated into the base-wide operation and maintenance program (recurring work program).
Po	tential information to review (where applicable):	
1.	Post-construction plan reviewed and approved by MS4	
2.	Records for post-construction BMP inspection and maintenance; both private and public if applicable	
3.	An O&M plan for post-construction BMPs from a recently approved project	
IN	DUSTRIAL/COMMERCIAL FACILITIES	
1.	Describe your industrial/commercial facility program, including the types and numbers of facilities covered. How were these facilities selected?	Buckley AFB has an active status industrial stormwater permit under the 2000 MSGP that covers Sector S – Air Transportation (SIC code 4581) and Sector L – Landfills and Land Application Sites (Activity code LF). The last comprehensive site compliance evaluation documented 20 regulated industrial activities and facilities selected based on the criteria in the 2000 MSGP and individual inspections.
2.	Describe the types of BMPs or stormwater requirements these facilities must meet.	The types of BMPs utilized at the regulated facilities include good housekeeping, source controls, preventative maintenance, material handling, waste management, employee training, record keeping, erosion and sediment control, and routine inspections.
3.	Describe your industrial/commercial inspection program (including the frequency of inspections and the number of inspectors)	Each facility is inspected on a regular frequency by the personnel assigned there; the frequency varies by facility from weekly to monthly. Each facility has a designated "unit environmental coordinator" and alternate, who provide a liaison function between the facility and CEV.
4.	Interview an inspector to assess how industrial/commercial stormwater inspections are conducted. Ask about the frequency of inspections and the number of inspectors.	
Po	tential information to review (where applicable):	

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1.	List of industrial/commercial facilities subject to			
	stormwater requirements			
2.	Inspection report(s) for selected facilities			
3.	Enforcement records for a facility out of compliance			
ILLICIT DISCHARGE DETECTION AND ELIMINATION				
2.	Describe your legal authority to prohibit illicit discharges and illegal dumping to the MS4 (including an exemptions). Describe any field screening activities.	The Base Commander is the senior ranking military person on Buckley AFB and has direct command and control, i.e., legal authority, over all operations, organizations, and personnel in the 460 SW, which includes enforcing compliance with applicable environmental regulations. As base host the 460 SW has support agreements in place with each associate or tenant organization located on Buckley AFB. The support agreements stipulate that the organization shall comply with applicable environmental regulations. Field screening activities include visual inspection and observation as part of all outside activity.		
	If an illicit discharge is discovered during screening, what is the process for determining the source and eliminating the discharge.	If an occurrence of water is observed, it is investigated by conducting a field review of surrounding physical conditions to determine possible sources (downspouts, lawn irrigation/sprinkler systems, maintenance activities, HVAC condenser discharge) and/or conducting a review of utility information GeoBase maps. Personnel from 460 CES/CEO are used as the resource for repairing utility system leaks, when possible; otherwise the repair project is performed by a contractor.		

3.	Describe your illicit discharge investigation and spill response programs, including staff and equipment available.	Cross-connections or illicit connections to the storm sewer system were investigated as part of the inflow and infiltration study and no illicit connections were detected and none are known to exist. The Spill Prevention, Control, and Countermeasure (SPCC) Plan describes plans, staff, and equipment for regulated oils to reduce or eliminate oil discharges to navigable waters of the United States. The Plan documents regulated containers at each facility and the inspection, testing, and maintenance procedures for those containers. The Plan also contains information regarding emergency response actions. The Buckley AFB Fire Department is the primary spill responder. For containers owned and operated by contractors temporarily working on Buckley AFB property, such as fuel tanker trucks, temporary aboveground storage tanks, or 55-gallon drums, spill response plans are covered by the contractor.
,		All shops have spill kits, and training is provided on the appropriate use of spill materials. All events are evaluated to determine the level of appropriate reporting.
4.	How are the locations of illicit discharges tracked and used to steer other SWMP components (i.e. industrial inspections, public education, etc).	Reportable spills are evaluated through an Environmental Incident Investigation Board to determine the root cause of the event, if the event was preventable, and what steps need to be implemented to be sure the event is not repeated. Smaller spills are similarly evaluated in-house, and training is provided on the spot. There are no illicit discharges due to cross-connections with the sanitary sewer.
5.	Describe your household hazardous waste collection program and any events which have taken place in an effort to prevent illicit discharges.	No household hazardous waste collection program is in place at this time. However, information is provided occasionally through a variety of means to inform personnel of the opportunities in the local community.
Po	tential information to review (where applicable):	
1.	List of illicit discharge events investigated over the past	
2.	Records on investigation, follow-up and enforcement relating to one or more event(s)	
3.	List of household hazardous waste collection program events and a general description of types of waste collected.	