

ESCA RP Erosion Monitoring Form

MRA: IAR - R47

Conducted By: J. Tallis

Monitoring Date: 1/5/2016

Type of Monitoring: Pre-rain event ☒ Post rain-event ☐ Routine ☐ Other ☐

1. Existing Erosion/Sediment Control Measures Present? ☒ Y or N. If N skip to 2.

Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles			
Blanket			
Silt Fence	A 100 ft stretch of silt fence on east end of R47 has degraded and needs replacing.		
Sand Bags			
Hydro-mulch + seeding	Escarpment has no new signs of erosion		

2. Are there signs of water erosion? Y ☒ N ☐ N/A ☐

Rilling - gullying - Loss of fines from surface - Sand/silt deposit in fans/basins

Comments:

3. Are there signs of wind erosion? Y ☒ N ☐ N/A ☐

Loss of fines on surface - Dunes - Soil on leaves - Other

Comments:

4. Are there areas of ponding? Y ☒ N ☐ Size and depth:

5. Work Areas

Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)

Describe:

6. Do you have other erosion concerns?

No.

Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.

ESCA RP Erosion Monitoring Form

Conducted By: J. TallisMonitoring Date: 1/7/2016MRA: FE61 - Grenade RangeWeather: Partly cloudy - 1" rain in past day.

Type of Monitoring: Pre-rain event - Post rain-event - Routine - Other

1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2.

Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles		N	
Blanket		N	
Silt Fence		N/A	
Sand Bags	West - most sand bag chevrons are filling w/ sand but its not a critical erosion control area and can happen along w/ other repairs		

2. Are there signs of water erosion? Y - N - N/A

Rilling - gullyng - Loss of fines from surface - Sand/silt deposit in fans/basins

Comment:

3. Are there signs of wind erosion? Y - N - N/A

Loss of fines on surface - Dunes - Soil on leaves - Other

Comments:

4. Are there areas of ponding?

Y/N Size and depth: 2"Yes but not a problem

5. Work Areas

Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)

Describe:

6. Do you have other erosion concerns?

No, however east slope is starting to get saturated. See addition sheet notes.

Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.

FEG Grenade Range Erosion Monitoring

Date:

17/2016

East facing slope is stable and small and large plants cover it. However, the same area is starting to get waterlogged and eroding. A new sand bagged water bed was visualized in case conditions get worse and it needs to be installed.



11/7/2016

1/7/2014

erosion repair completed

Replaced 100 ft
silt fence

4

ESCA RP Erosion Monitoring Form

Conducted By: J. TallisMonitoring Date: 1/20/2016MRA: IAR - R 47Weather: cloudy - little rainType of Monitoring: Pre-rain event ☒ Post rain-event ☐ Routine ☐ Other ☐

1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2.

Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles	—		
Blanket	—		
Silt Fence		y	Will need to fix silt fence basins eventually (next month or sooner).
Sand Bags	—		

2. Are there signs of water erosion? ☒ Y ☐ N ☐ N/A☒ Rilling - gully - Loss of fines from surface - Sand/silt deposit in fans/basinsComment: Tiny bit of rilling on N side of R.47.3. Are there signs of wind erosion? Y ☒ N ☐ N/A

Loss of fines on surface - Dunes - Soil on leaves - Other

Comments:

4. Are there areas of ponding?

☒ Y ☐ N Size and depth:Previously in basins

5. Work Areas

Stockpiles are surrounded with wattles, covered, compacted ☒ not present? (Circle applicable)

Describe:

6. Do you have other erosion concerns?

No

Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.

ESCA RP Erosion Monitoring Form

Conducted By: J. TallisMonitoring Date: 3/8/2016MRA: IAR - R47Weather: Clear, 60°FType of Monitoring: Pre-rain event - Post rain-event - Routine - Other1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2.

Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles	<u>—</u>		
Blanket	<u>—</u>		
Silt Fence	<u>Generally functioning great except some under cutting on some of the retention basins</u>	<u>Y</u>	<u>n 1 days work to fix silt fence basins on N side of R47. Only shovel needed</u>
Sand Bags			

2. Are there signs of water erosion? Y - N - N/A

Rilling - gullyng - Loss of fines from surface - Sand/silt deposit in fans/basins

Comment:

3. Are there signs of wind erosion? Y - N - N/A

Loss of fines on surface - Dunes - Soil on leaves - Other

Comments:

4. Are there areas of ponding?

Y N Size and depth:

5. Work Areas

Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)

Describe:

6. Do you have other erosion concerns?

No. Conditions look great.

Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.

IAR-R47 Erosion Monitoring Date: 3/8/2016

IAR-R47 Erosion Monitoring Date: 3/8/2016

IAR-R47 Erosion Monitoring Date: 3/8/2016

IAR-R47 Erosion Monitoring Date: 3/8/2016

Minimal repair
need @ about
3 retention basins

New silt fence
looks great

[illegible]

ESCA RP Erosion Monitoring Form		Conducted By: <u>J. Tallis</u>	
MRA: <u>IAR-Development Parcel</u>		Monitoring Date: <u>3/8/2016</u>	
Weather: <u>Clear, 60°F</u>			
Type of Monitoring: Pre-rain event - <u>Post rain-event</u> - Routine - Other			
1. Existing Erosion/Sediment Control Measures Present? <u>Y</u> or N. If N skip to 2.			
Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles			
Blanket			
Silt Fence			
Sand Bags	<u>Most are working as expected (properly) -</u> <u>water in two locations water has</u> <u>eroded through the water bars and</u> <u>could be repaired. Water and soil</u> <u>are not blowing from the development</u> <u>parcel into habit parcel or 100 ft buffer.</u>		
Bars			
2. Are there signs of water erosion? <u>Y</u> - N - N/A			
Rilling	<u>gully - Loss of fines from surface - Sand/silt deposit in fans/basins</u>		
Comments:			
3. Are there signs of wind erosion? <u>Y</u> - <u>N</u> - N/A			
Loss of fines on surface - Dunes - Soil on leaves - Other			
Comments:			
4. Are there areas of ponding? <u>Y</u> / <u>N</u> Size and depth:			
5. Work Areas			
Stockpiles are surrounded with wattles, covered, compacted, <u>not present?</u> (Circle applicable)			
Describe:			
6. Do you have other erosion concerns?			
<u>No</u>			
Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47. <u>Yes</u>			

ESCA RP Erosion Monitoring Form		Conducted By: <u>J. Tallis</u>	
MRA: <u>EEG - Grenade Range</u>		Monitoring Date: <u>3/8/2016</u>	
Weather: <u>Windy, partly cloudy, ~55°F</u>			
Type of Monitoring: Pre-rain event <input checked="" type="radio"/> Post-rain-event <input checked="" type="radio"/> Routine <input type="radio"/> Other <input type="radio"/>			
1. Existing Erosion/Sediment Control Measures Present? <input checked="" type="radio"/> Y or N. If N skip to 2.			
Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles		N	
Blanket	N/A		
Silt Fence	N/A		
Sand Bags		N	
Water bar	water bar on rd entering grenade range needs	Y	
\$	repair. also water is flowing from south side of grenade range into rd. Needs shoveling to divert.		
2. Are there signs of water erosion? Y - <input checked="" type="radio"/> N - <input type="radio"/> N/A			
Rilling - gullyng - Loss of fines from surface - Sand/silt deposit in fans/basins			
Comment:			
3. Are there signs of wind erosion? Y - <input checked="" type="radio"/> N - <input type="radio"/> N/A			
Loss of fines on surface - Dunes - Soil on leaves - Other			
Comments:			
4. Are there areas of ponding? Y <input checked="" type="radio"/> N <input type="radio"/> Size and depth:			
5. Work Areas			
Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)			
Describe:			
6. Do you have other erosion concerns?			
No			
Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.			

ESCA RP Erosion Monitoring Form

Conducted By: J. Tallis + W. FerrenMRA: SEA - Blue Line Rd.Monitoring Date: 4/26/2016Weather: ClearType of Monitoring: Pre-rain event - Post rain-event - Routine - Other1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2.

Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles	<u>-</u>		
Blanket	<u>-</u>		
Silt Fence	<u>-</u>		
Sand Bags	<u>-</u>		
Rolling Burn	<u>Y</u>		

2. Are there signs of water erosion? Y - N - N/ARilling - gullyng - Loss of fines from surface - Sand/silt deposit in fans/basinsComment: North end of Blue Line Rd. in oak woodland - Road is slowly worsening.3. Are there signs of wind erosion? Y - N - N/A

Loss of fines on surface - Dunes - Soil on leaves - Other

Comments:

4. Are there areas of ponding?

Y / N Size and depth:

5. Work Areas

Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)

Describe:

6. Do you have other erosion concerns?

No.

Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.

ESCA RP Erosion Monitoring Form			Conducted By: <u>Joshua Tallis</u>
MRA:	<u>1AR-Development Parcel</u>		Monitoring Date: <u>10/3/2016</u>
Weather:	<u>Partly Cloudy</u>		
Type of Monitoring:	<u>Pre-rain event</u> - Post rain-event - <u>Routine</u> - Other		
1. Existing Erosion/Sediment Control Measures Present? <u>Y</u> or N. If N skip to 2.			
Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles	<u>yes</u>		
Blanket	<u>—</u>		
Silt Fence	<u>—</u>		
Sand Bags	<u>So so.</u>		<u>Many of the bags have decomposed and left a mound of sand in their place. Maybe this will suffice.</u>
2. Are there signs of water erosion? <u>Y</u> - <u>N</u> - N/A			
Rilling - gully - Loss of fines from surface - Sand/silt deposit in fans/basins			
Comment:			
3. Are there signs of wind erosion? <u>Y</u> - <u>N</u> - N/A			
<u>Loss of fines on surface</u> - Dunes - Soil on leaves - Other			
Comments: <u>Minimal sand movement from W to E.</u>			
4. Are there areas of ponding? <u>Y</u> / <u>N</u> Size and depth:			
5. Work Areas			
Stockpiles are surrounded with wattles, covered, compacted, <u>not present?</u> (Circle applicable)			
Describe:			
6. Do you have other erosion concerns?			
<u>Erosion control structures are tired but nearby habitat parcels are not threatened by erosion or deposition.</u>			
Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.			
<u>yes.</u>			

ESCA RP Erosion Monitoring Form

Conducted By: J. TallisMonitoring Date: 10/3/2016MRA: PFWeather: Clear, 60°FType of Monitoring: Pre-rain event - Post rain-event - Routine - Other

1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2.

Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles	—		
Blanket	—		
Silt Fence	—		
Sand Bags	—		

2. Are there signs of water erosion? Y N N/A

Rilling - gully - Loss of fines from surface - Sand/silt deposit in fans/basins

Comment:

3. Are there signs of wind erosion? Y N N/A

Loss of fines on surface - Dunes - Soil on leaves - Other

Comments:

4. Are there areas of ponding?

Y N Size and depth:

5. Work Areas

Stockpiles are surrounded with wattles, covered, compacted not present? (Circle applicable)

Describe:

6. Do you have other erosion concerns?

No - Conditions along and near Grigling Rd and Watkins Gate Road are stable.

Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.

ESCA RP Erosion Monitoring Form		Conducted By: <u>J. Tallis</u>	
MRA: <u>FEG - Grenade Range</u>	Monitoring Date: <u>10/3/2016</u>		
Weather: <u>Partly cloudy, light sprinkle.</u>			
Type of Monitoring: <u>Pre-rain event - Post rain-event</u> <input checked="" type="radio"/> Routine <input type="radio"/> Other			
1. Existing Erosion/Sediment Control Measures Present? <u>Y</u> or N. If N skip to 2.			
Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles	<u>Yes</u>		
Blanket	<u>—</u>		
Silt Fence	<u>—</u>		
Sand Bags	<u>Yes</u>		
2. Are there signs of water erosion? <u>Y</u> - <u>N</u> - N/A			
Rilling - gully - Loss of fines from surface - Sand/silt deposit in fans/basins			
Comment:			
3. Are there signs of wind erosion? <u>Y</u> - <u>N</u> - N/A			
Loss of fines on surface - Dunes - Soil on leaves - Other			
Comments:			
4. Are there areas of ponding? <u>Y</u> <u>N</u> Size and depth:			
5. Work Areas			
Stockpiles are surrounded with wattles, covered, compacted, <u>not present?</u> (Circle applicable)			
Describe:			
6. Do you have other erosion concerns?			
<u>No. Steep slopes are vegetating nicely and are ready for wet season</u>			
Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.			

ESCA RP Erosion Monitoring Form			Conducted By: <u>J. Talli's</u>
MRA: <u>IAR - R47</u>	Monitoring Date: <u>10/3/2016</u>		
Weather: <u>Partly cloudy, 69°F</u>			
Type of Monitoring: Pre-rain event - Post rain-event - <u>Routine</u> - Other			
1. Existing Erosion/Sediment Control Measures Present? <u>Y</u> or N. If N skip to 2.			
Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles	<u>-</u>		
Blanket	<u>-</u>		
Silt Fence		<u>Y</u>	<u>On north side of R47 the silt fence needs minor maintenance.</u>
Sand Bags	<u>-</u>		
2. Are there signs of water erosion? <u>Y</u> - <u>N</u> - N/A			
Rilling - gully - Loss of fines from surface - Sand/silt deposit in fans/basins			
Comment:			
3. Are there signs of wind erosion? <u>Y</u> - <u>N</u> - N/A			
Loss of fines on surface - Dunes - Soil on leaves - Other			
Comments: <u>The wind screen on the west side fence is coming apart in areas. It also looks like someone has lifted the fence.</u>			
4. Are there areas of ponding? <u>Y</u> / <u>N</u> Size and depth:			
5. Work Areas			
Stockpiles are surrounded with wattles, covered, compacted, <u>not present?</u> (Circle applicable)			
Describe:			
6. Do you have other erosion concerns?			
<u>None.</u>			
Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.			
<u>all photo point photos monitored.</u>			

ESCA RP Erosion Monitoring Form

Conducted By: J. Tallis

MRA: FEG

Monitoring Date: 11/1/2016

Weather: Partly Cloudy, 60°F, Rain in past 24 hours

Type of Monitoring: Pre-rain event - Post rain event - Routine - Other

1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2.

Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles	yes		
Blanket	yes		
Silt Fence	—		
Sand Bags	yes		

2. Are there signs of water erosion? Y ☒ N ☐ N/A

Rilling - gullyng - Loss of fines from surface - Sand/silt deposit in fans/basins

Comments:

3. Are there signs of wind erosion? Y ☒ N ☐ N/A

Loss of fines on surface - Dunes - Soil on leaves - Other

Comments:

4. Are there areas of ponding?

☒ N ☐ Y Size and depth:

5. Work Areas

Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)

Describe:

6. Do you have other erosion concerns?

No. Conditions look great. Many new seedlings growing.

Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.

ESCA RP Erosion Monitoring Form		Conducted By: <u>J. Tallis</u>	
MRA:	<u>FEGr - Grenade Range</u>		
Weather:	<u>Partly cloudy, 50°F</u>		
Type of Monitoring: Pre-rain event - Post rain-event - <u>Routine</u> - Other			
1. Existing Erosion/Sediment Control Measures Present? <u>Y</u> or N. If N skip to 2.			
Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles	<u>NA</u>		
Blanket	<u>NA</u>		
Silt Fence	<u>NA</u>		
Sand Bags	<u>Yes</u>	<u>No</u>	
2. Are there signs of water erosion? <u>Y</u> <u>N</u> - N/A			
Rilling - gullying - Loss of fines from surface - Sand/silt deposit in fans/basins			
Comment:	<u>site is regrowing beautifully</u>		
3. Are there signs of wind erosion? <u>Y</u> <u>N</u> - N/A			
Loss of fines on surface - Dunes - Soil on leaves - Other			
Comments:			
4. Are there areas of ponding? <u>Y</u> <u>N</u> Size and depth: <u>4"</u>			
<u>Not a problem.</u>			
5. Work Areas			
Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)			
Describe:			
6. Do you have other erosion concerns?			
<u>No</u>			
Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.			

ESCA RP Erosion Monitoring Form		Conducted By: <u>J. Tallis</u>	
MRA: <u>SEA</u>	Monitoring Date: <u>12/12/2016</u>		
Weather: <u>Partly cloudy, 50's °F</u>			
Type of Monitoring: <u>Pre-rain event - Post rain-event - Routine - Other</u>			
1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2.			
Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles	NA		
Blanket	NA		
Silt Fence	NA		
Sand Bags	NA		
water bar	Yes	No	
2. Are there signs of water erosion? Y - N - N/A			
Rilling - gully - Loss of fines from surface - Sand/silt deposit in fans/basins			
Comment	<u>on road at north end of blue line road in Seaside WRA.</u>		
3. Are there signs of wind erosion? Y - N - N/A			
Loss of fines on surface - Dunes - Soil on leaves - Other			
Comments:			
4. Are there areas of ponding? Y/N Size and depth:			
5. Work Areas			
Stockpiles are surrounded with wattles, covered, compacted, <u>not present?</u> (Circle applicable)			
Describe:			
6. Do you have other erosion concerns?			
No			
Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.			

ESCA RP Erosion Monitoring Form

Conducted By: J. TallisMRA: IARMonitoring Date: 12/12/2016Weather: 50°F, AppiaKlingType of Monitoring: Pre-rain event - Post rain-event - Routine - Other

1. Existing Erosion/Sediment Control Measures Present? Y or N. If N skip to 2.

Type	Functioning Properly? (Evidence of overtopping, undermining or flow around?)	Need repair or correction?	Comments/Notes
Wattles	<u>Yes</u>	<u>No</u>	
Blanket	<u>Yes</u>	<u>No</u>	
Silt Fence	<u>NA</u>		
Sand Bags	<u>NA</u>		

2. Are there signs of water erosion? Y N - N/A

Rilling - gullyng - Loss of fines from surface - Sand/silt deposit in fans/basins

Comments:

3. Are there signs of wind erosion? Y N - N/A

Loss of fines on surface - Dunes - Soil on leaves - Other

Comments:

4. Are there areas of ponding?

Y / N Size and depth:

5. Work Areas

Stockpiles are surrounded with wattles, covered, compacted, not present? (Circle applicable)

Describe:

6. Do you have other erosion concerns?

New erosion control BMPs functioning well after rain event.

Note: Photograph all BMPs and areas where flow might become concentrated. In IAR photograph the steep, bare parts of the development parcel adjacent to range 47.

IAR-R47 Erosion Monitoring

12/2/2016

New erosion control BMPs installed after fence and gopher wire removed

New straw
wattles

New coin erosion control blanket

old compacted road
disced to improve
infiltration and
reduce run-off

[illegible]

Table E-1
2016 Erosion Monitoring and Maintenance

ESCA RP 2016 Annual Natural Resource Report - Appendix E

Date	MRA	Location	Type of Monitoring	Findings	Actions
1/5/2016	IAR	Range 47	Post-Rain Event	-100 foot stretch of silt fence on east side of R47 is degrading and needs replacing. -Escarpment has no new signs of erosion.	--
1/7/2016	FEG	Grenade Range	Post-Rain Event	-West-most sand bag chevrons are filling with sand but it's not a critical erosion control area and can happen along with other repairs -There are areas with ponded water, such as right below escarpment, but not erosion problem. -East facing slope is stable and mostly vegetated, however, the same area is starting to get water-logged and mushy. A new sand bag water bar was planned in case conditions get worse. It's shown on field data sheet.	-Lay out new sand bag water bar plan.
1/7/2016	IAR	Range 47	--	--	-Install 100-foot silt fence on east side of Range 47 as seen on data sheet.
1/20/2016	IAR	Range 47	Post-Rain Event	-Silt fence basins on north bottom side of Range 47 are in non-urgent need of maintenance within next month, depending on rain. -Minor rilling on north side of R47. -Ponding in silt fence basins.	--
3/8/2016	IAR	Range 47	Post-Rain Event	-Minor undercutting of silt fence basins -About 1 day of work to fix silt basins. Only shovel needed. -New silt fence near front gate looks great.	--
3/8/2016	IAR	Development Parcel	Post rain-event	-Most sand bags working as expected (properly). In two locations water has eroded through the water bars and should be repaired. -Water and soil are not flowing from the development parcel into habitat parcel or into the 100-foot buffer.	--

Table E-1
2016 Erosion Monitoring and Maintenance

ESCA RP 2016 Annual Natural Resource Report - Appendix E

Date	MRA	Location	Type of Monitoring	Findings	Actions
3/8/2016	FEG	Grenade Range	Post rain-event	-Water bar on west side needs repair. Water is flowing from south side of grenade range into road and needs shoveling to divert.	--
4/26/2016	SEA	Blue Line Road	Routine	-Rolling berm functioning well. -There is rilling on Blue Line Road at north end where it passes through oak woodland and is worsening.	--
10/3/2016	IAR	Development Parcel	Routine	-Wattles functioning properly. -Many sand bags have decomposed and left a mound of sand in their place. This will suffice but is less resilient than full bag. -There is minimal wind based sand movement from west to east. -Erosion control structures are tired but nearby habitat parcels are not threatened by erosion or deposition.	--
10/3/2016	PF	Phase 2	Routine	-Conditions along and near Gigling Rd. and Watkins Gate Rd. are stable.	--
10/3/2016	FEG	Grenade Range	Routine	-Wattles and Sand Bags functioning properly. -Steep east-facing slope is vegetating well and appear ready for wet season rains.	--
10/3/2016	IAR	Range 47	Routine	-North side of R47 silt fence needs minor maintenance. -The wind screen on the west side of R47 appears to have been lifted over a fence post and is not functioning properly.	--
11/1/2016	FEG	Grenade Range	Post-Rain Event	-All erosion control BMPs are functioning properly. -Good regrowth of vegetation. -No signs of soil movement.	--
12/12/2016	FEG	Grenade Range	Routine	-All erosion control BMPs are functioning properly. -No erosion concern.	--
12/12/2016	SEA	Blue Line Road	Routine	-Only erosion control BMP is water bar near Watkins Gate West which is working properly. -Rilling was observed at the usual location on north end of blue line road. Rills are about 6 inches deep at deepest point.	--

Table E-1
2016 Erosion Monitoring and Maintenance

ESCA RP 2016 Annual Natural Resource Report - Appendix E

Date	MRA	Location	Type of Monitoring	Findings	Actions
12/12/2016	IAR	Range 47	Routine	-New erosion blanket and wattles installed after removal of fenceline and associated silt fence. -BMPs look great after 0.5 inches of rain. -Compacted dirt road entering R47 from the east was loosened/tilled to reduce runoff and increase infiltration.	--

Table E-1
2016 Erosion Monitoring and Maintenance

ESCA RP 2016 Annual Natural Resource Report - Appendix E

Date	MRA	Location	Type of Monitoring	Findings	Actions

Table E-1
2016 Erosion Monitoring and Maintenance

ESCA RP 2016 Annual Natural Resource Report - Appendix E

Date	MRA	Location	Type of Monitoring	Findings	Actions

Appendix E - Erosion Monitoring and Maintenance Photo-documentation



Photograph 1

Location: Interim Action Ranges (IAR) Munitions Response Area (MRA), Range 47

Description:
100-foot length of silt fence in need of repair on east end of Range 47 in the Interim Action Ranges MRA. This silt fence was later replaced.

Date: 5 January 2016



Photograph 2

Location: IAR MRA, Range 47

Description:
Silt fence in need of maintenance on north side of Interim Action Ranges MRA. This silt fence was later repaired.

Date: 8 March 2016

FORA ESCA Remediation Program

Appendix E - Erosion Monitoring and Maintenance Photo-documentation



Photograph: 3

Location:

Future East
Garrison (FEG)
MRA, Grenade
Range

Description:

East facing slope in
Future East
Garrison MRA
grenade range is
well vegetated and
stable

Date: 27 May 2016



Photograph 4

Location: FEG
MRA, Grenade
Range

Description: Blue
wildrye
hydroseeded in fall
2014 is now well
established and
seeding.

Date: 27 October
2016

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Appendix E - Erosion Monitoring and Maintenance Photo-documentation



Photograph 5

Location: IAR
MRA, Range 47

Description:
New erosion control
BMPs installed at
north end of Range
47 after removal of
fence and gopher
wire.

Date: 12 December
2016



Photograph 6

Location: IAR
MRA, Range 47

Description:
New erosion control
BMPs installed at
north end of Range
47 after removal of
fence and gopher
wire.

Date: 12 December
2016

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