

## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow December 23, 2014 to December 29, 2014 29 cfs

S-12 Discharge 13 cfs  
 S-333 Discharge 16 cfs

----- Data Summary -----  
 December 12, 2014 to December 19, 2014  
 WCA-3A Stage (end of week) 10.17 ft. msl  
 Angel's 5.85 ft. msl  
 G3273 6.62 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.02	0.86
S-140		0.79
ENP		M
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This Week's Avg	0.02	0.83
Pre-Project Avg	0.24	0.76

----- Transition Zone Information -----

**WCA-3A is in Zone E** **Discharge Coeff. (cfs/ft) = 5000**  
 Supplemental discharge is 0 cfs  
 Distance to Bottom of Current Zone N/A feet  
 Distance to Top of Current Zone 0.08 feet

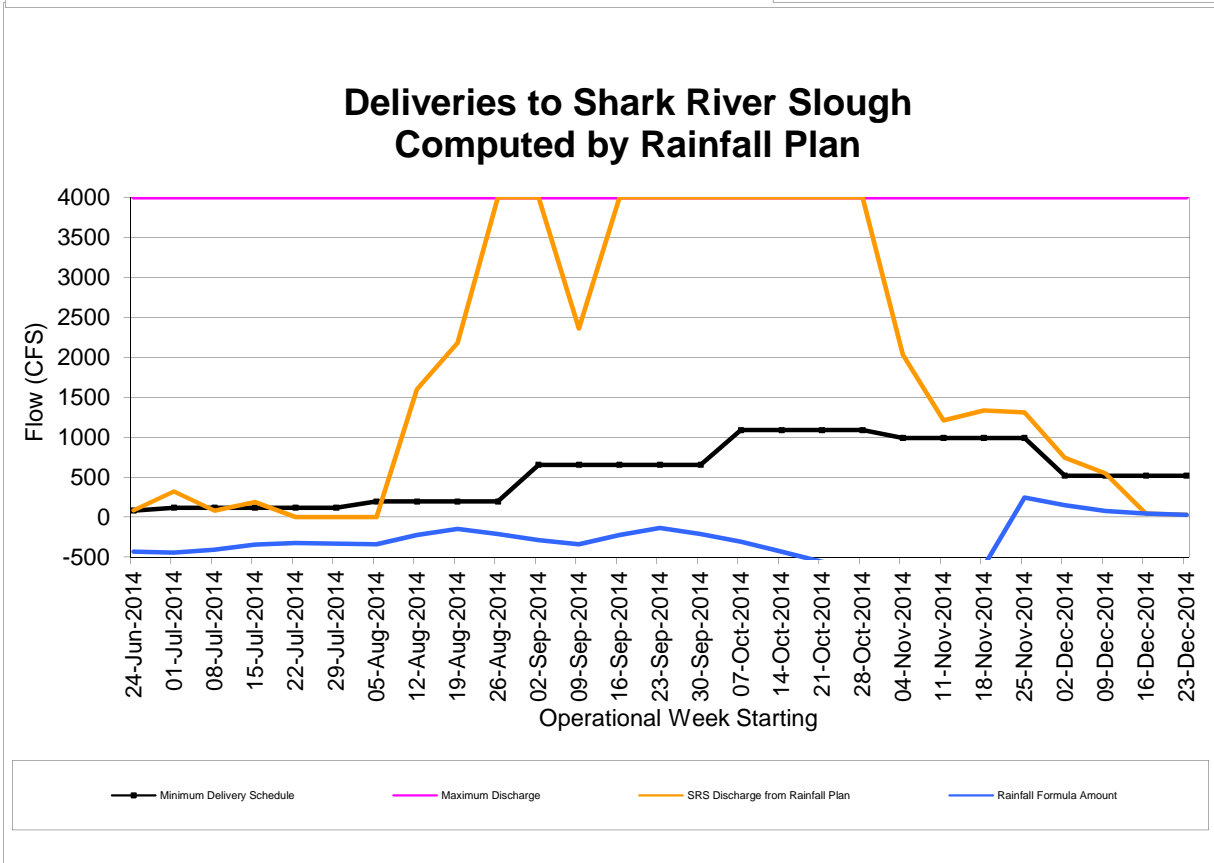
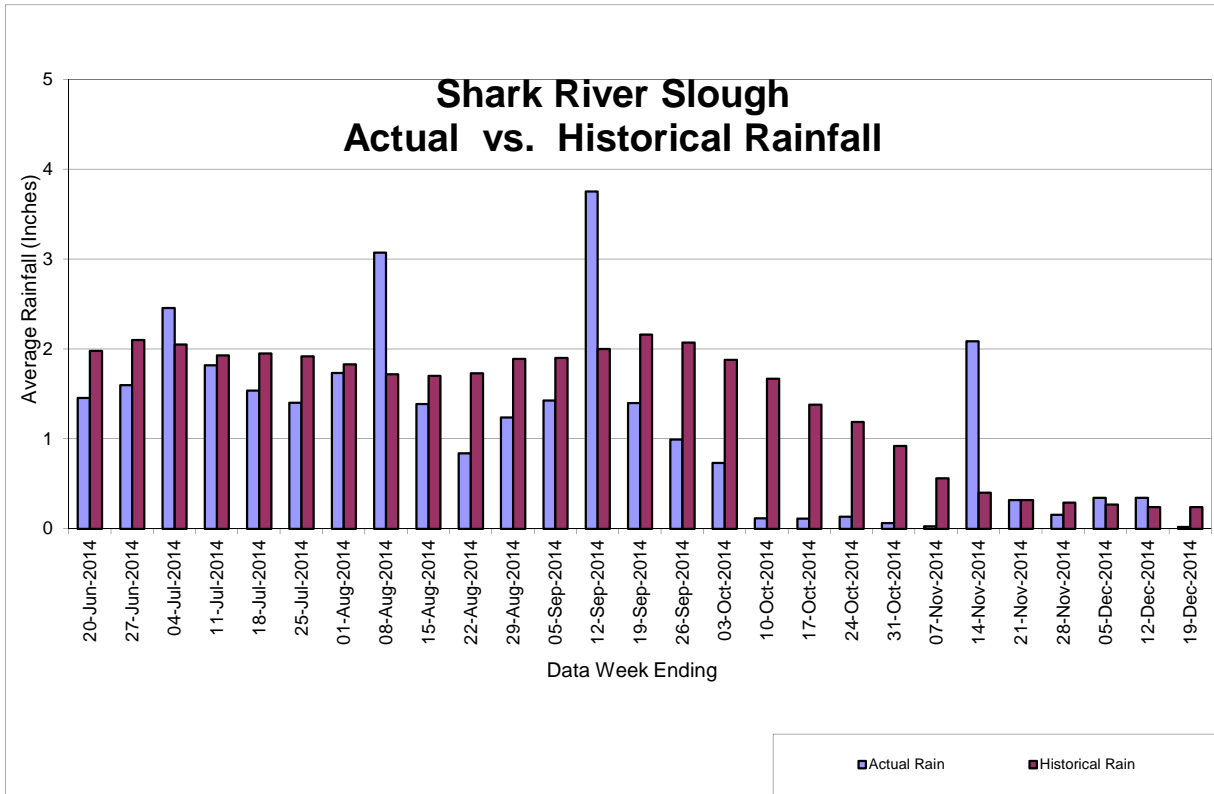
----- Statistical Parameters -----

Rainfall Formula Amount 29 cfs  
 Last Week's Rainfall Formula 46 cfs  
 Pre-Project Mean Discharge 321 cfs

Rainfall Excess Terms  
 RL1 -0.11 RL2 1.42 RL3 -4.61

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow December 16, 2014 to December 22, 2014 46 cfs

S-12 Discharge 21 cfs  
 S-333 Discharge 25 cfs

----- Data Summary -----  
 December 5, 2014 to December 12, 2014  
 WCA-3A Stage (end of week) 10.22 ft. msl  
 Angel's 5.95 ft. msl  
 G3273 6.71 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.35	0.78
S-140		0.64
ENP		M
-----		
This Week's Avg	0.35	0.71
Pre-Project Avg	0.24	0.78

----- Transition Zone Information -----

**WCA-3A is in Zone E** **Discharge Coeff. (cfs/ft) = 5000**

Supplemental discharge is 0 cfs  
 Distance to Bottom of Current Zone N/A feet  
 Distance to Top of Current Zone 0.03 feet

----- Statistical Parameters -----

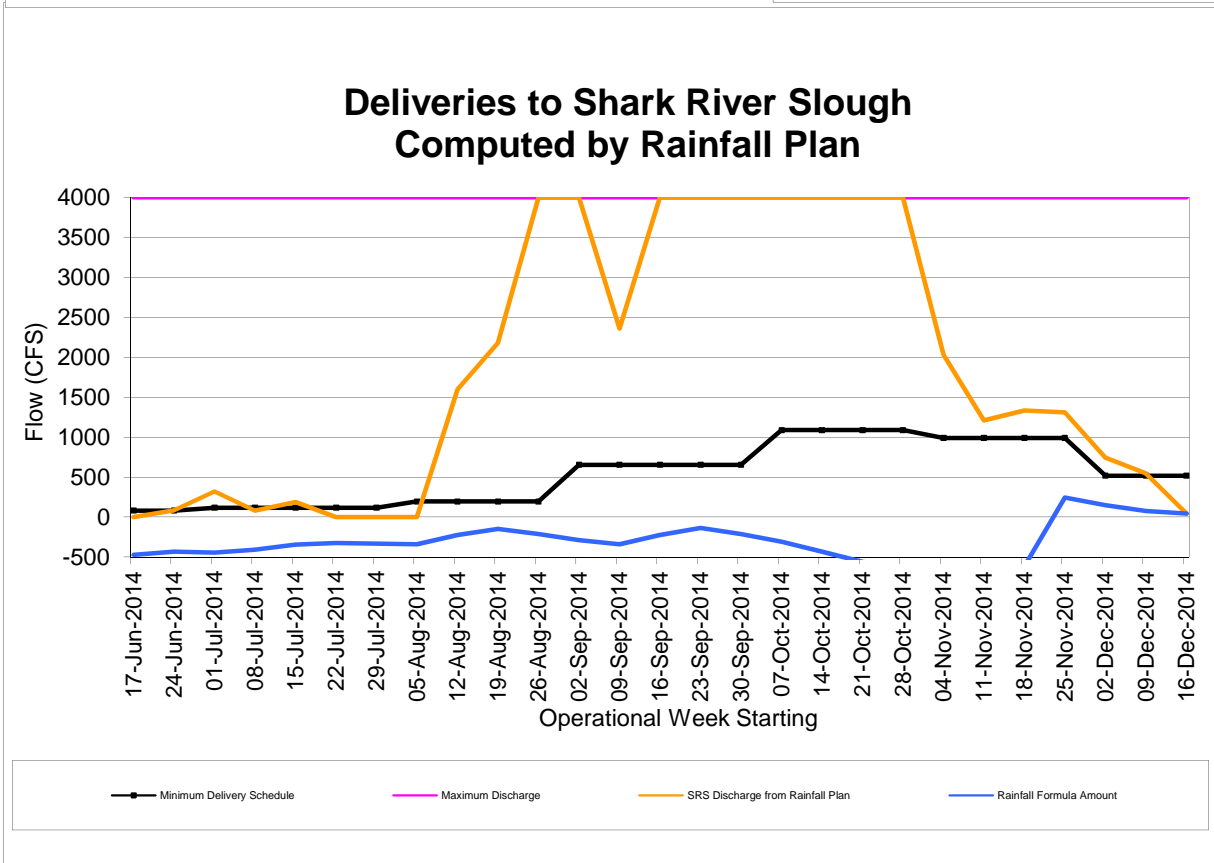
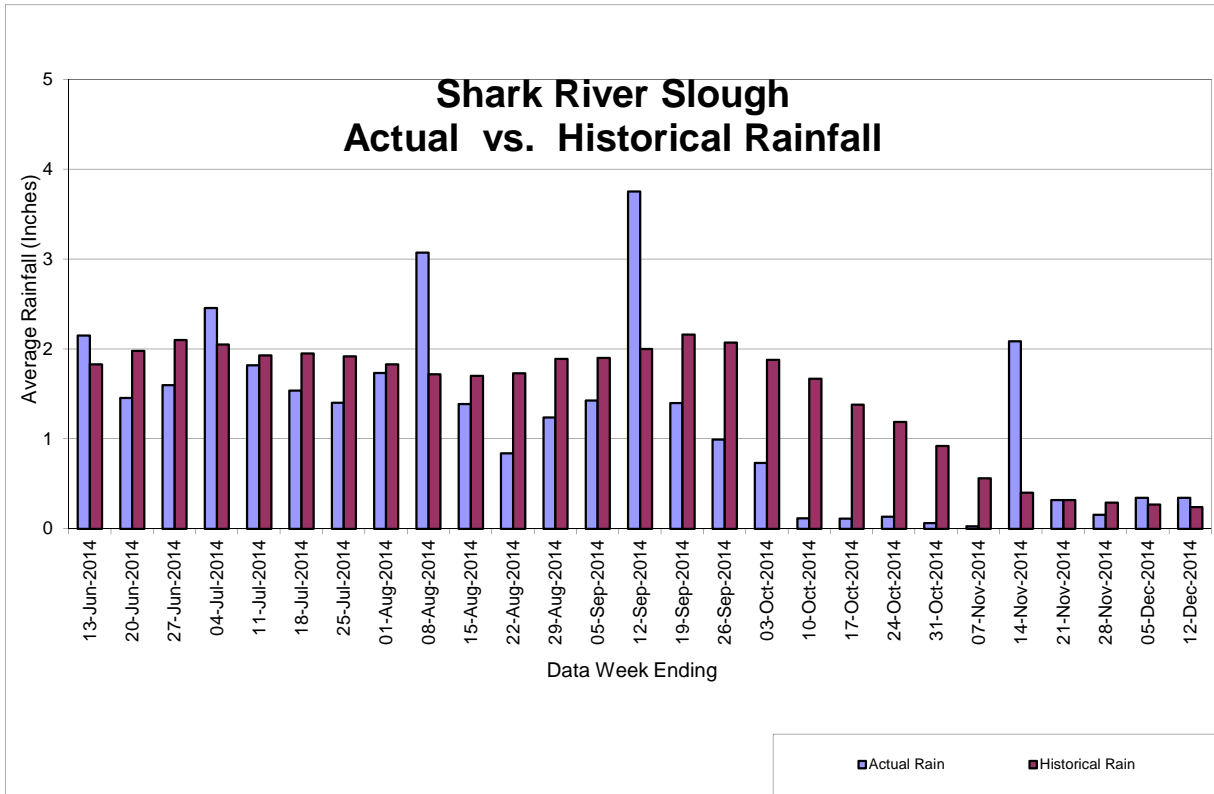
Rainfall Formula Amount 46 cfs  
 Last Week's Rainfall Formula 77 cfs  
 Pre-Project Mean Discharge 376 cfs

Rainfall Excess Terms

RL1 0.20	RL2 0.55	RL3 -5.45
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**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow December 9, 2014 to December 15, 2014 546 cfs

S-12 Discharge	246 cfs
S-333 Discharge	300 cfs

----- Data Summary -----      November 28, 2014 to December 5, 2014

WCA-3A Stage (end of week)	10.31	ft. msl
Angel's	5.99	ft. msl
G3273	6.74	ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.35	0.76
 S-140		 0.93
 ENP		 M
-----		
This Week's Avg	0.35	0.85
Pre-Project Avg	0.27	0.80

----- Transition Zone Information -----

<b>WCA-3A is in Zone D</b>	<b>Discharge Coeff. (cfs/ft) = 5000</b>
Supplemental discharge is	469 cfs
Distance to Bottom of Current Zone	-0.09 feet
Distance to Top of Current Zone	0.19 feet

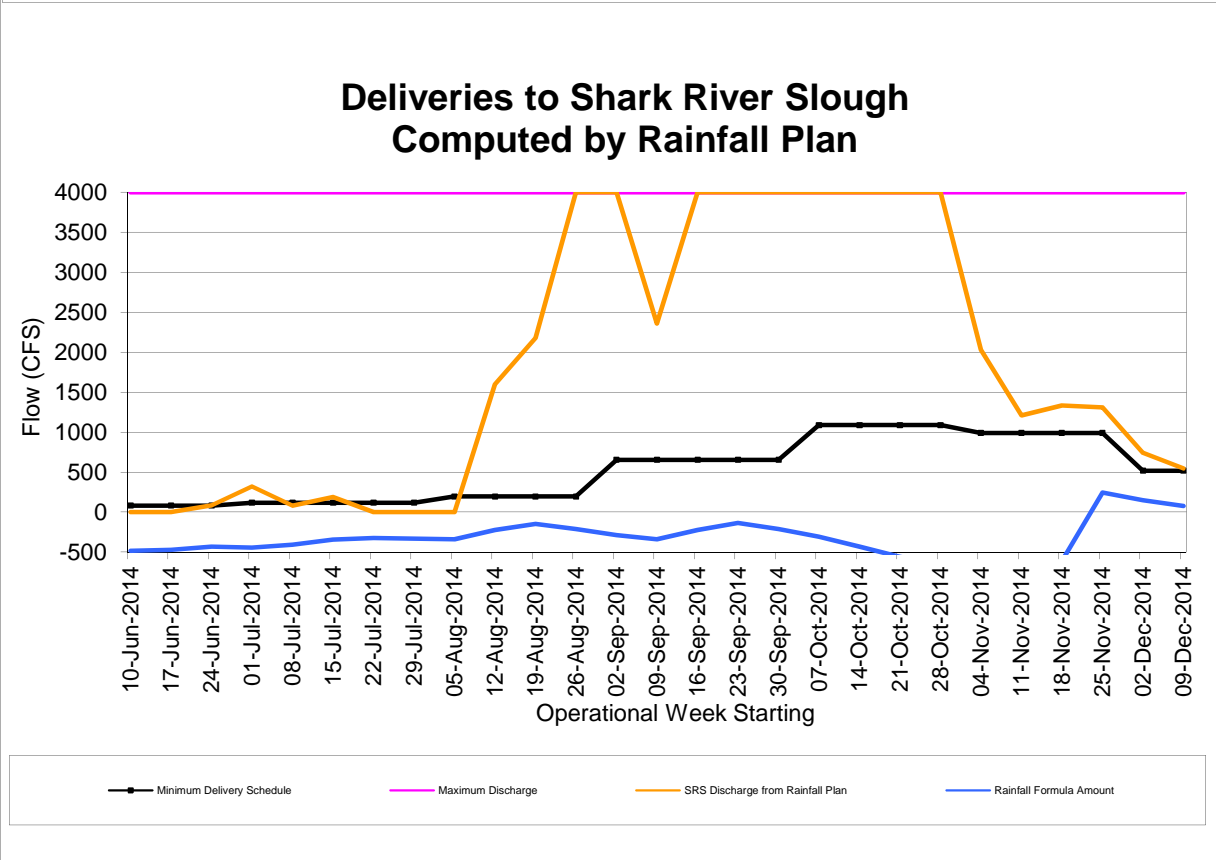
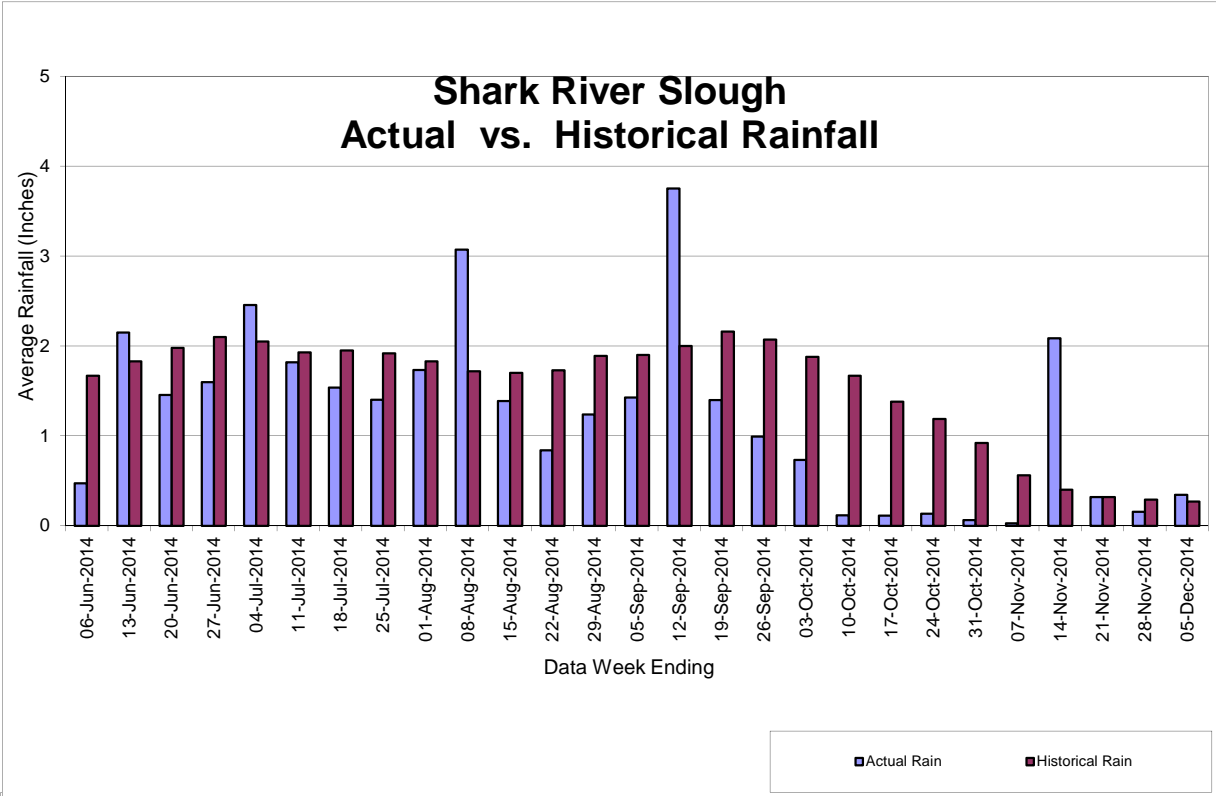
----- Statistical Parameters -----

Rainfall Formula Amount	77 cfs
Last Week's Rainfall Formula	150 cfs
Pre-Project Mean Discharge	462 cfs

Rainfall Excess Terms	RL1 -0.16	RL2 -0.27	RL3 -5.71
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**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow December 2, 2014 to December 8, 2014 742 cfs

S-12 Discharge 334 cfs  
 S-333 Discharge 408 cfs

----- Data Summary ----- November 21, 2014 to November 28, 2014  
 WCA-3A Stage (end of week) 10.29 ft. msl  
 Angel's 5.91 ft. msl  
 G3273 6.74 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.15	0.95
S-140		0.85
ENP		M
-----		
This Week's Avg	0.15	0.90
Pre-Project Avg	0.29	0.82

----- Transition Zone Information -----

**WCA-3A is in Zone D** **Discharge Coeff. (cfs/ft) = 5000**  
 Supplemental discharge is 592 cfs  
 Distance to Bottom of Current Zone -0.12 feet  
 Distance to Top of Current Zone 0.21 feet

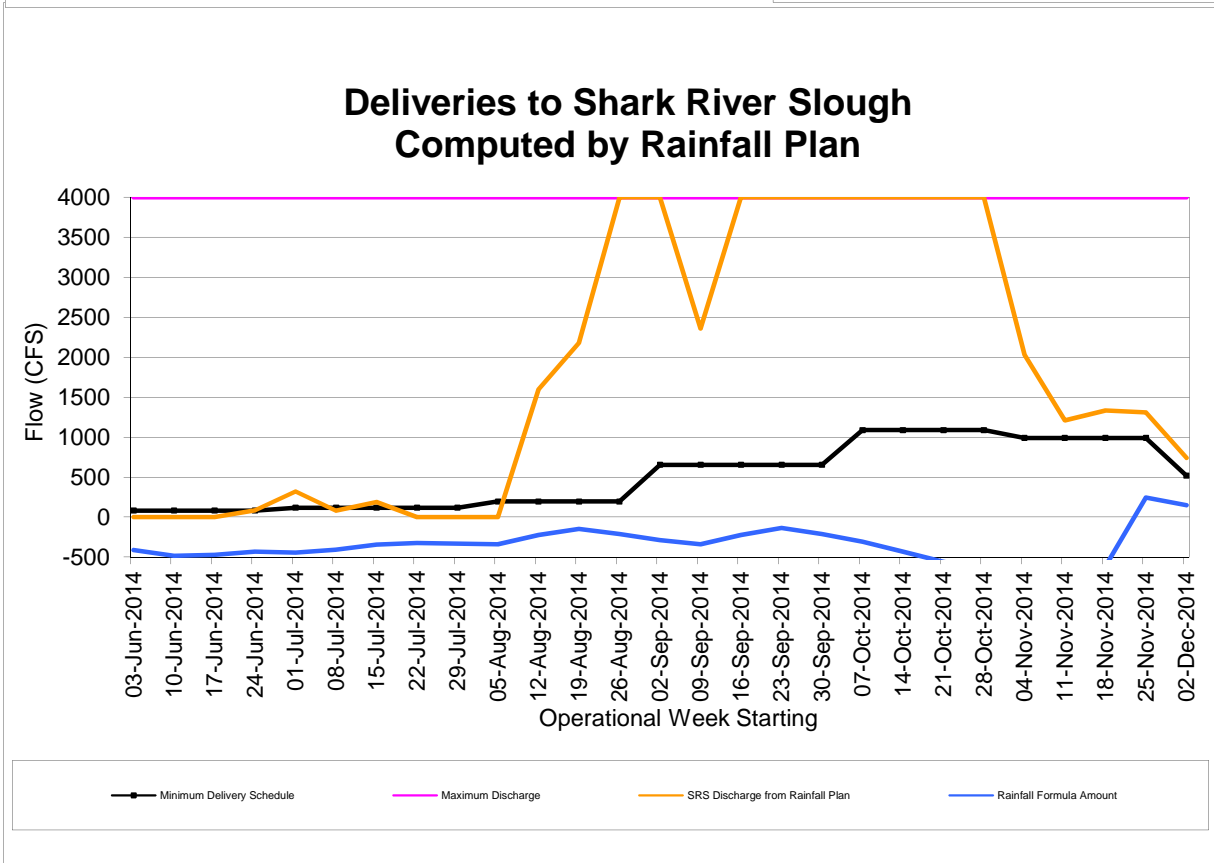
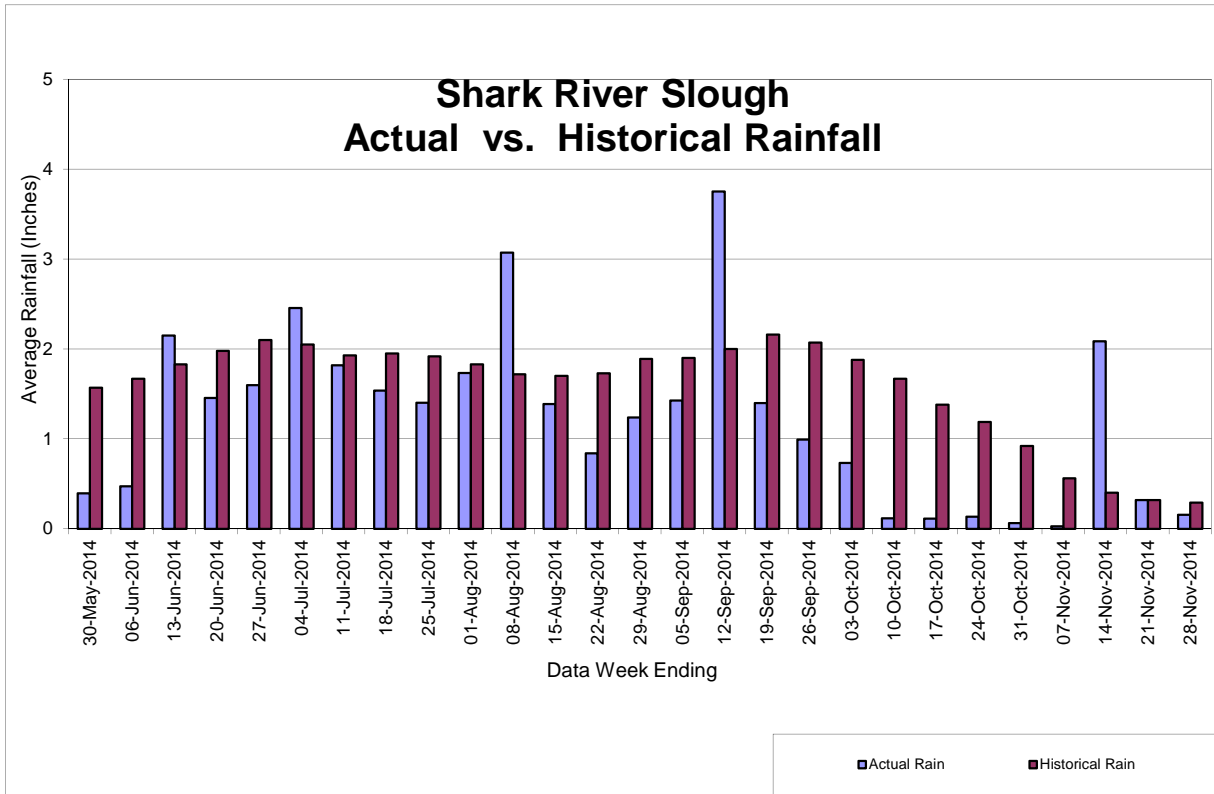
----- Statistical Parameters -----

Rainfall Formula Amount 150 cfs  
 Last Week's Rainfall Formula 245 cfs  
 Pre-Project Mean Discharge 566 cfs

Rainfall Excess Terms  
 RL1 -0.26 RL2 -1.42 RL3 -5.40

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow November 25, 2014 to December 1, 2014 1309 cfs

S-12 Discharge 589 cfs  
 S-333 Discharge 720 cfs

----- Data Summary ----- November 14, 2014 to November 21, 2014  
 WCA-3A Stage (end of week) 10.34 ft. msl  
 Angel's 5.81 ft. msl  
 G3273 6.66 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.32	0.71
S-140		1.17
ENP		M
-----		
This Week's Avg	0.32	0.94
Pre-Project Avg	0.32	0.87

----- Transition Zone Information -----

**WCA-3A is in Zone D** **Discharge Coeff. (cfs/ft) = 5000**  
 Supplemental discharge is 1064 cfs  
 Distance to Bottom of Current Zone -0.21 feet  
 Distance to Top of Current Zone 0.16 feet

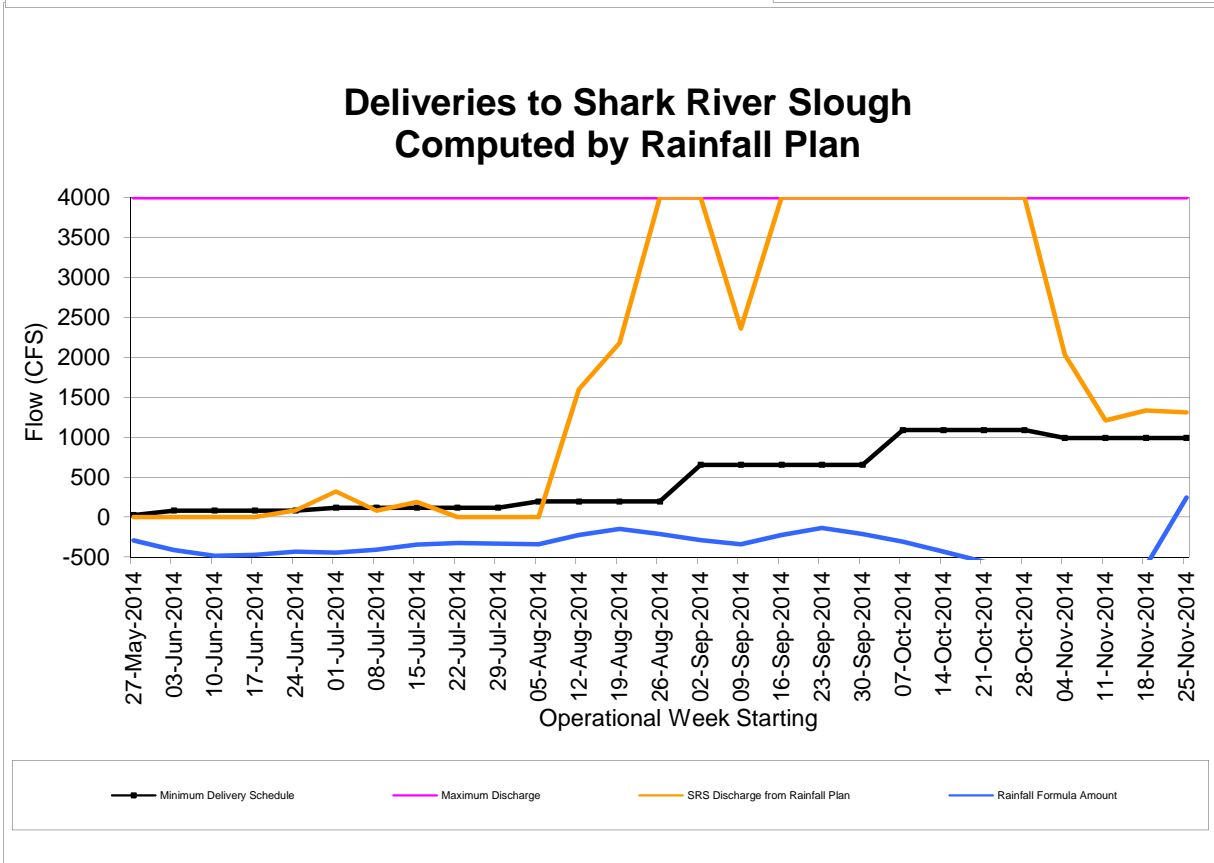
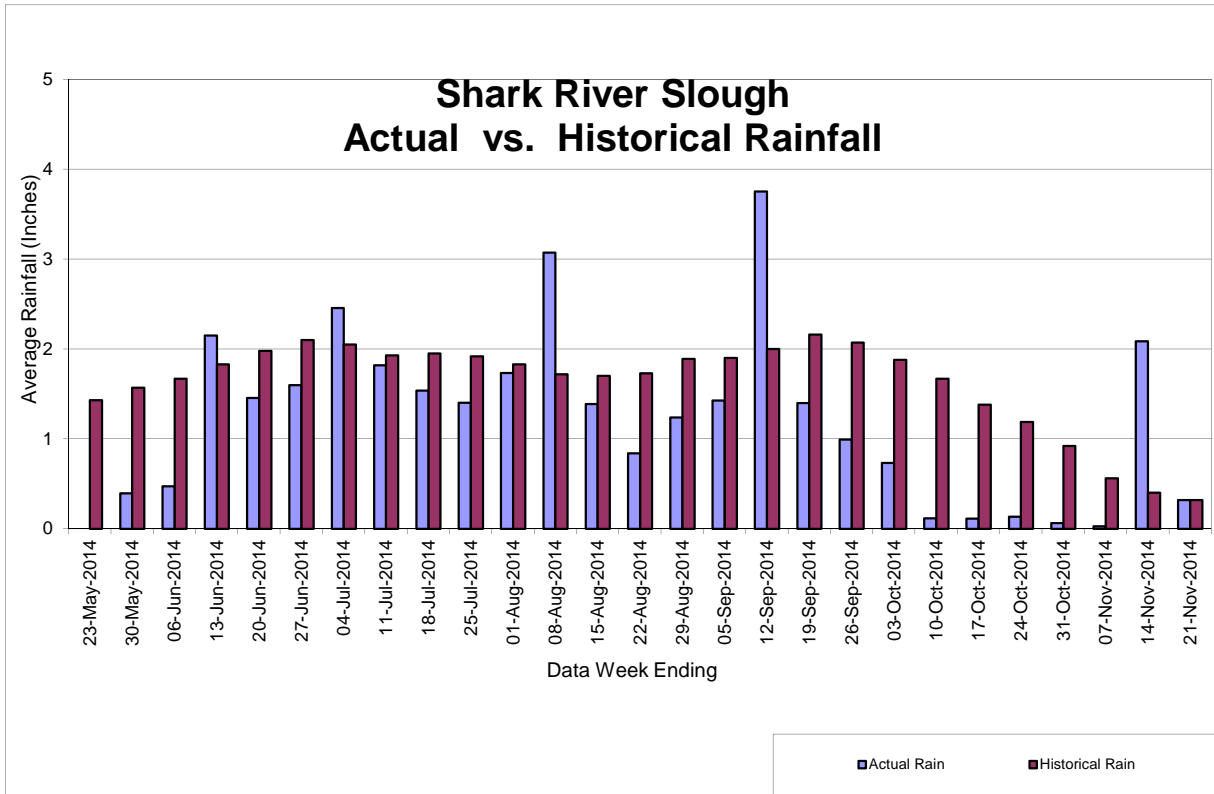
----- Statistical Parameters -----

Rainfall Formula Amount 245 cfs  
 Last Week's Rainfall Formula 207 cfs  
 Pre-Project Mean Discharge 689 cfs

Rainfall Excess Terms  
 RL1 1.58 RL2 -4.61 RL3 -4.67

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## PRELIMINARY WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow November 25, 2014 to December 1, 2014 864 cfs

S-12 Discharge 389 cfs  
 S-333 Discharge 475 cfs

----- Data Summary ----- November 14, 2014 to November 21, 2014

WCA-3A Stage (end of week)	10.30	ft. msl
Angel's	5.75	ft. msl
G3273	6.60	ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.19	1.02
S-140		1.35
ENP		M
-----		
This Week's Avg	0.19	1.18
Pre-Project Avg	0.32	0.87

----- Transition Zone Information -----

<b>WCA-3A is in Zone D</b>	<b>Discharge Coeff. (cfs/ft) = 5000</b>
Supplemental discharge is	864 cfs
Distance to Bottom of Current Zone	-0.17 feet
Distance to Top of Current Zone	0.20 feet

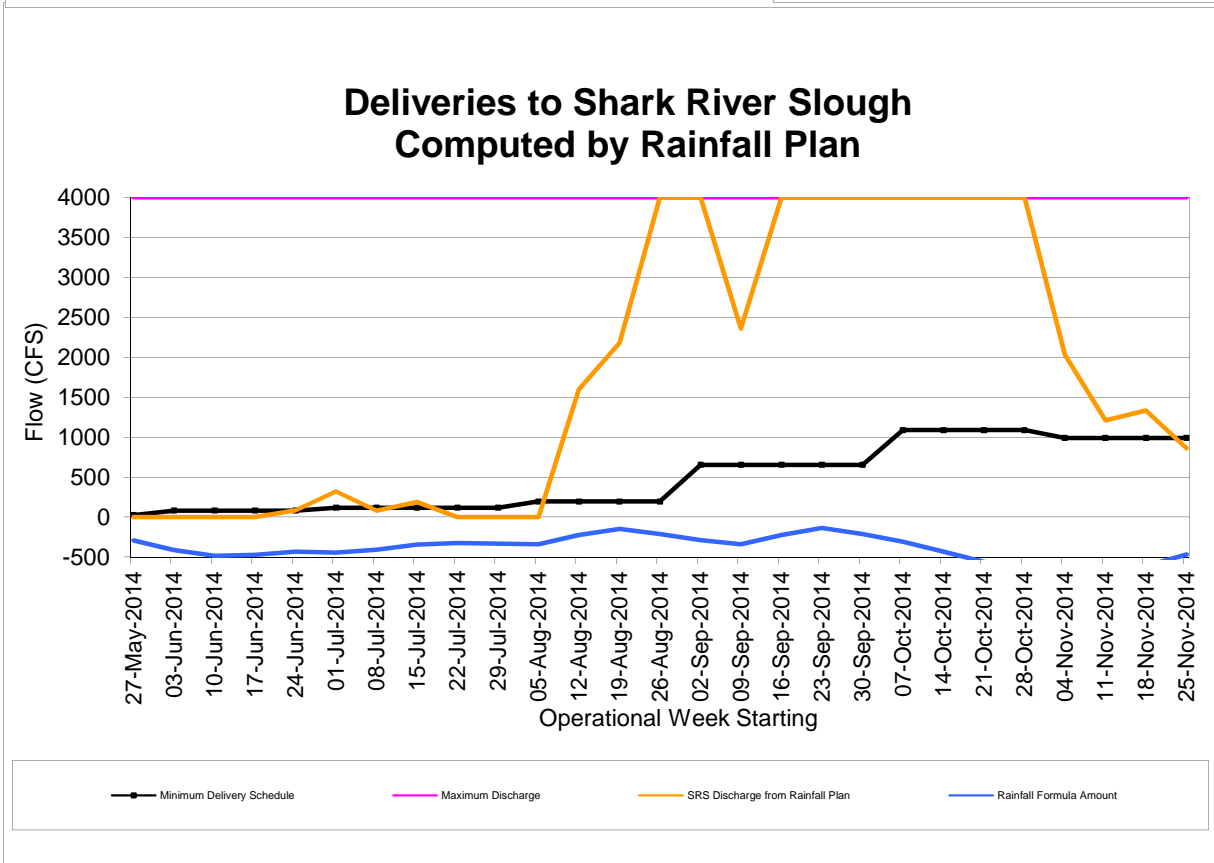
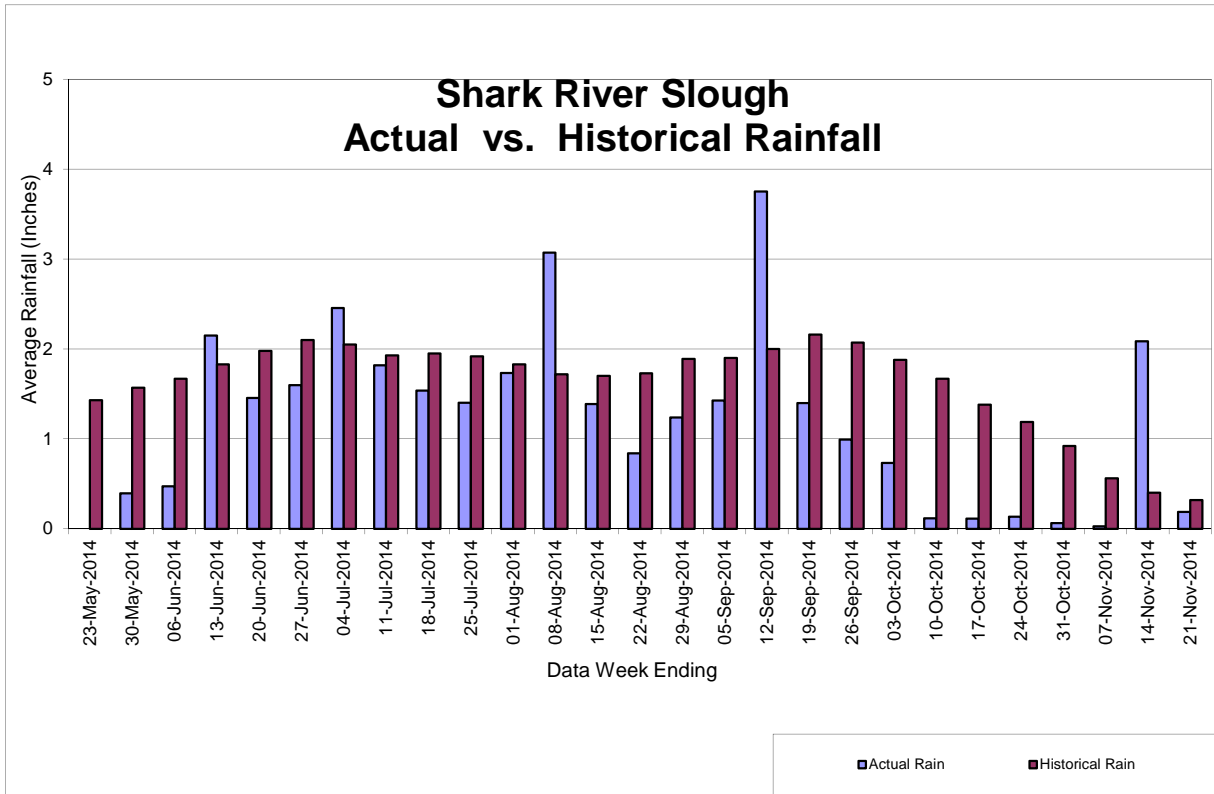
----- Statistical Parameters -----

Rainfall Formula Amount	-467 cfs
Last Week's Rainfall Formula	-613 cfs
Pre-Project Mean Discharge	0 cfs

Rainfall Excess Terms	RL1 1.26	RL2 -4.61	RL3 -4.67
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**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow November 18, 2014 to November 24, 2014 1337 cfs

S-12 Discharge 602 cfs  
 S-333 Discharge 735 cfs

----- Data Summary -----  
 November 7, 2014 to November 14, 2014  
 WCA-3A Stage (end of week) 10.35 ft. msl  
 Angel's 5.81 ft. msl  
 G3273 6.64 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	2.09	0.97
S-140		0.98
ENP		M
-----		
This Week's Avg	2.09	0.97
Pre-Project Avg	0.40	0.91

----- Transition Zone Information -----

**WCA-3A is in Zone D** **Discharge Coeff. (cfs/ft) = 5000**  
 Supplemental discharge is 1337 cfs  
 Distance to Bottom of Current Zone -0.27 feet  
 Distance to Top of Current Zone 0.15 feet

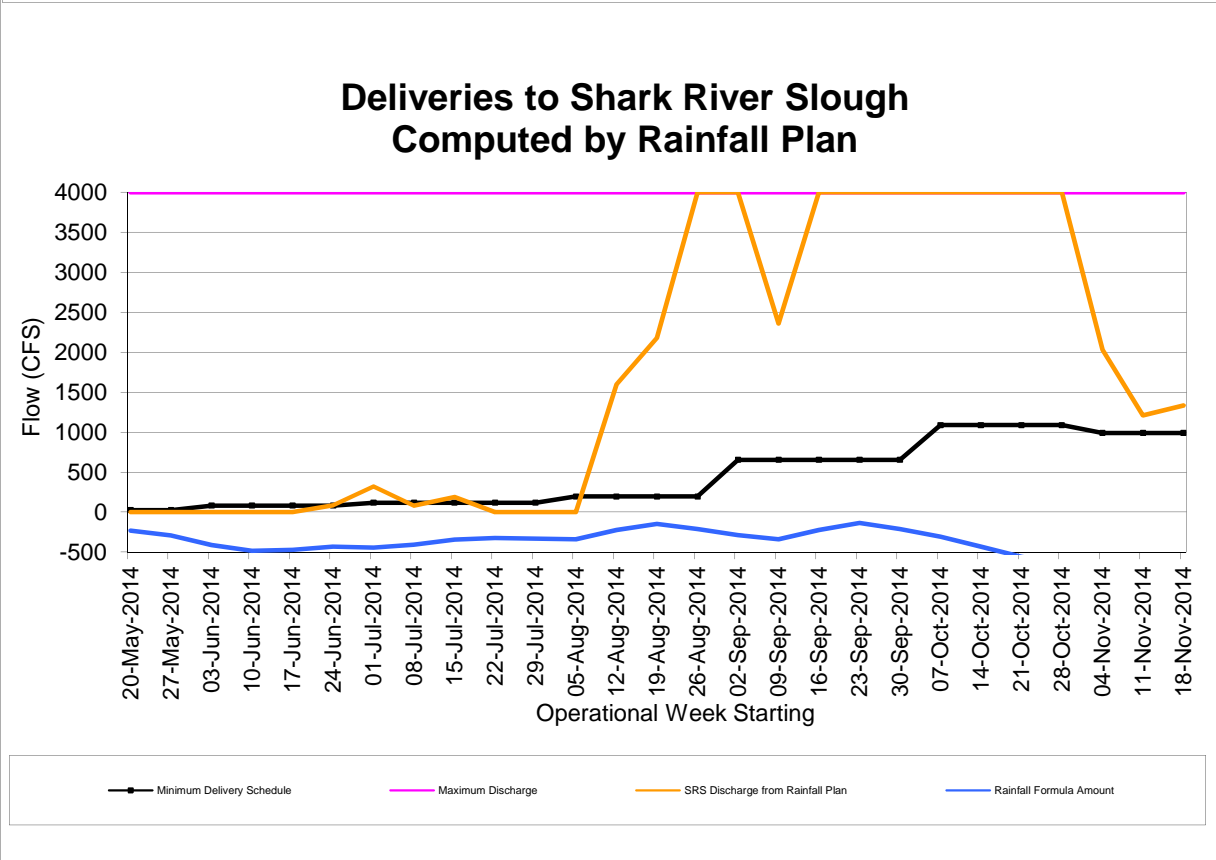
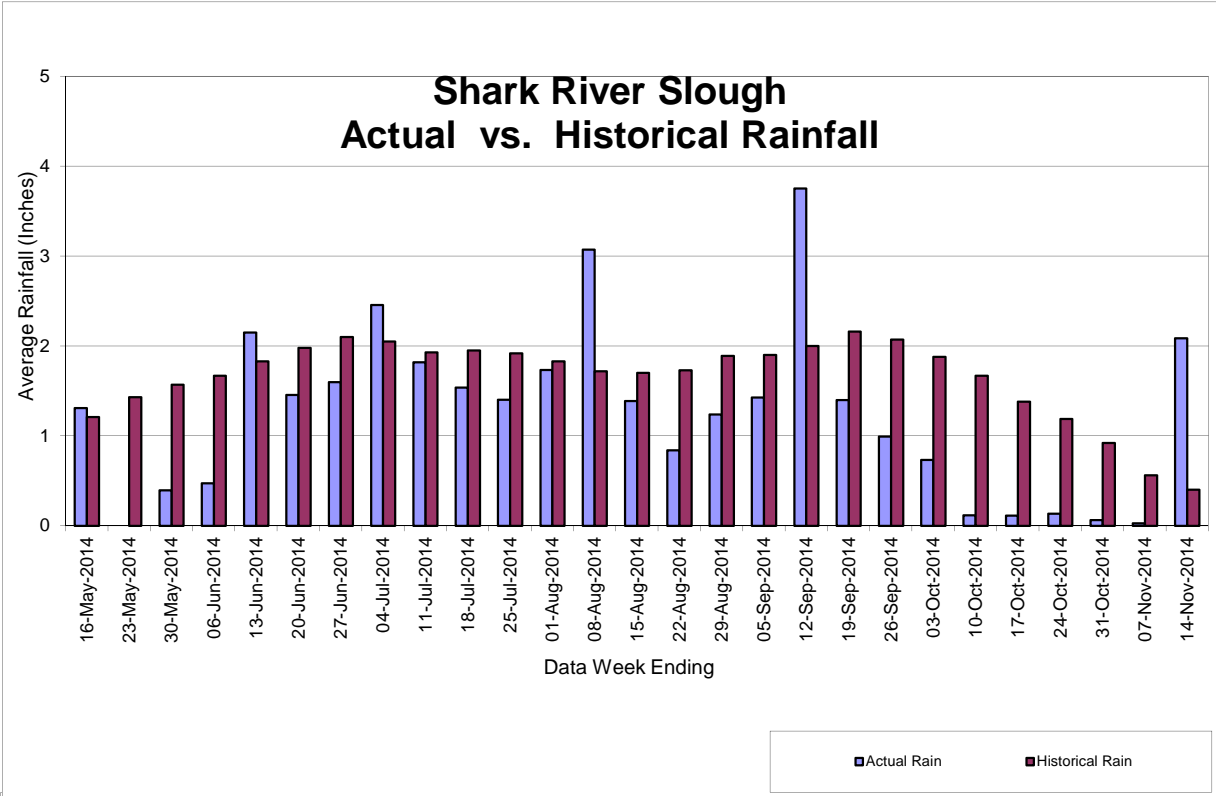
----- Statistical Parameters -----

Rainfall Formula Amount -613 cfs  
 Last Week's Rainfall Formula -738 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 0.81 RL2 -5.45 RL3 -1.28

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow November 11, 2014 to November 17, 2014 1209 cfs

S-12 Discharge 544 cfs  
 S-333 Discharge 665 cfs

----- Data Summary -----  
 October 31, 2014 to November 7, 2014  
 WCA-3A Stage (end of week) 10.28 ft. msl  
 Angel's 5.87 ft. msl  
 G3273 6.68 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.03	1.22
S-140		1.47
ENP		M
-----		
This Week's Avg	0.03	1.34
Pre-Project Avg	0.56	0.97

----- Transition Zone Information -----

**WCA-3A is in Zone D** **Discharge Coeff. (cfs/ft) = 5000**  
 Supplemental discharge is 1209 cfs  
 Distance to Bottom of Current Zone -0.24 feet  
 Distance to Top of Current Zone 0.22 feet

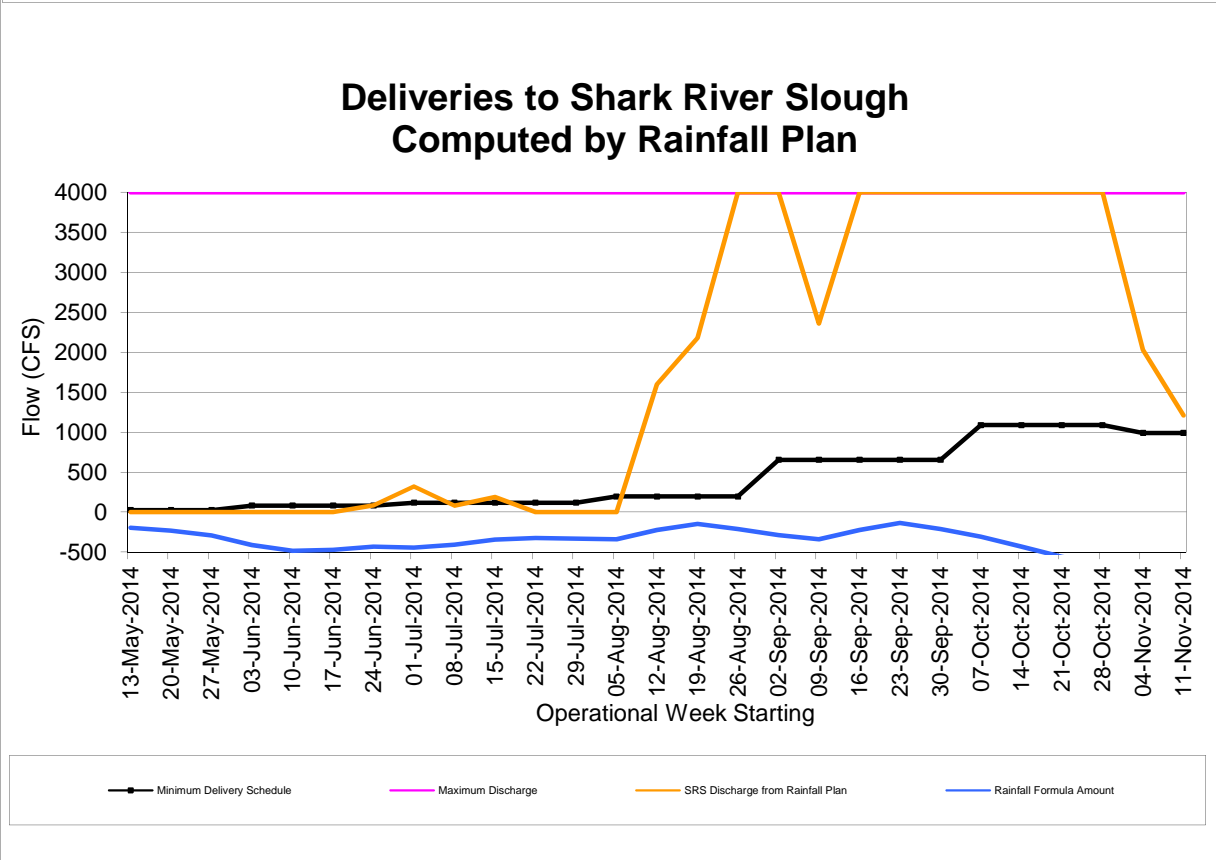
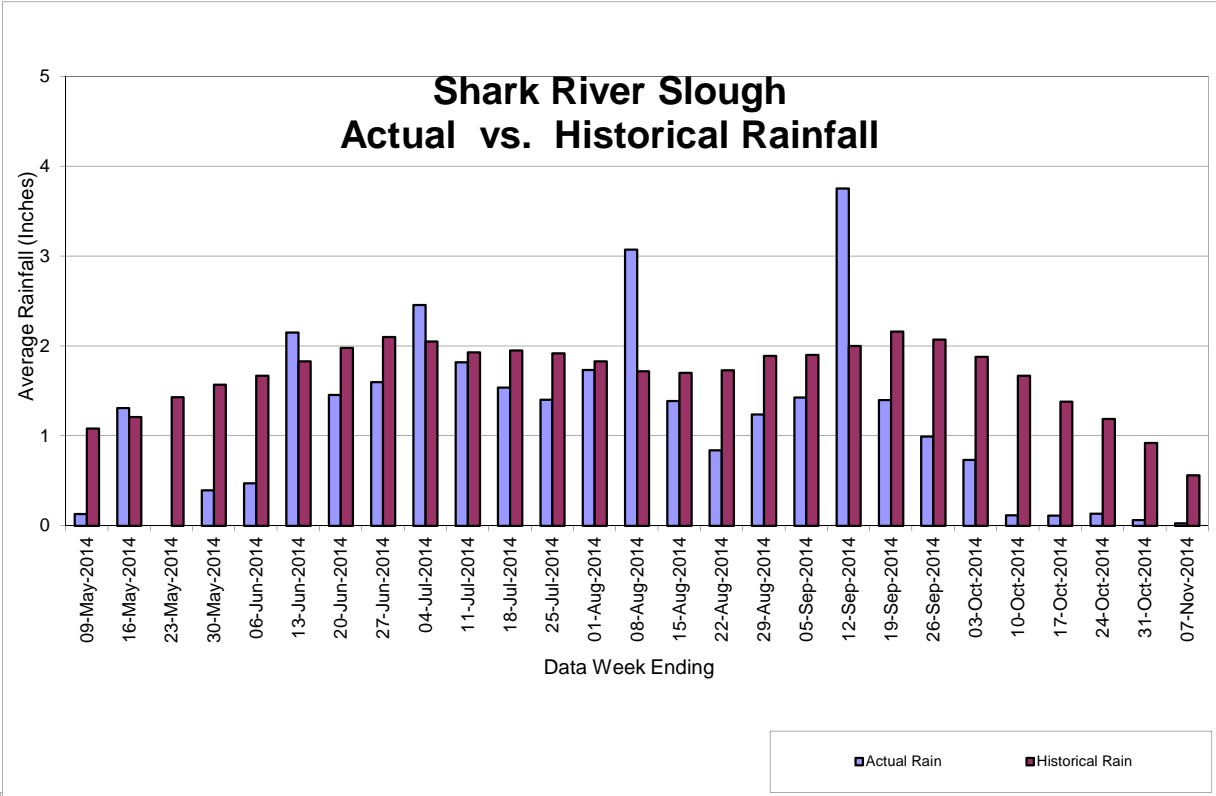
----- Statistical Parameters -----

Rainfall Formula Amount -738 cfs  
 Last Week's Rainfall Formula -707 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -1.85 RL2 -5.71 RL3 -0.56

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow November 4, 2014 to November 10, 2014 2032 cfs

S-12 Discharge 914 cfs  
 S-333 Discharge 1117 cfs

----- Data Summary -----  
 WCA-3A Stage (end of week) October 24, 2014 to October 31, 2014  
 Angel's 10.40 ft. msl  
 G3273 6.17 ft. msl  
6.84 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.06	1.22
S-140		1.23
ENP		M
-----		
This Week's Avg	0.06	1.22
Pre-Project Avg	0.92	1.02

----- Transition Zone Information -----

**WCA-3A is in Zone D**

Supplemental discharge is 2032 cfs  
 Distance to Top of Zone E -0.41 feet  
 Distance to Bottom of Regulatory Zone 0.10 feet

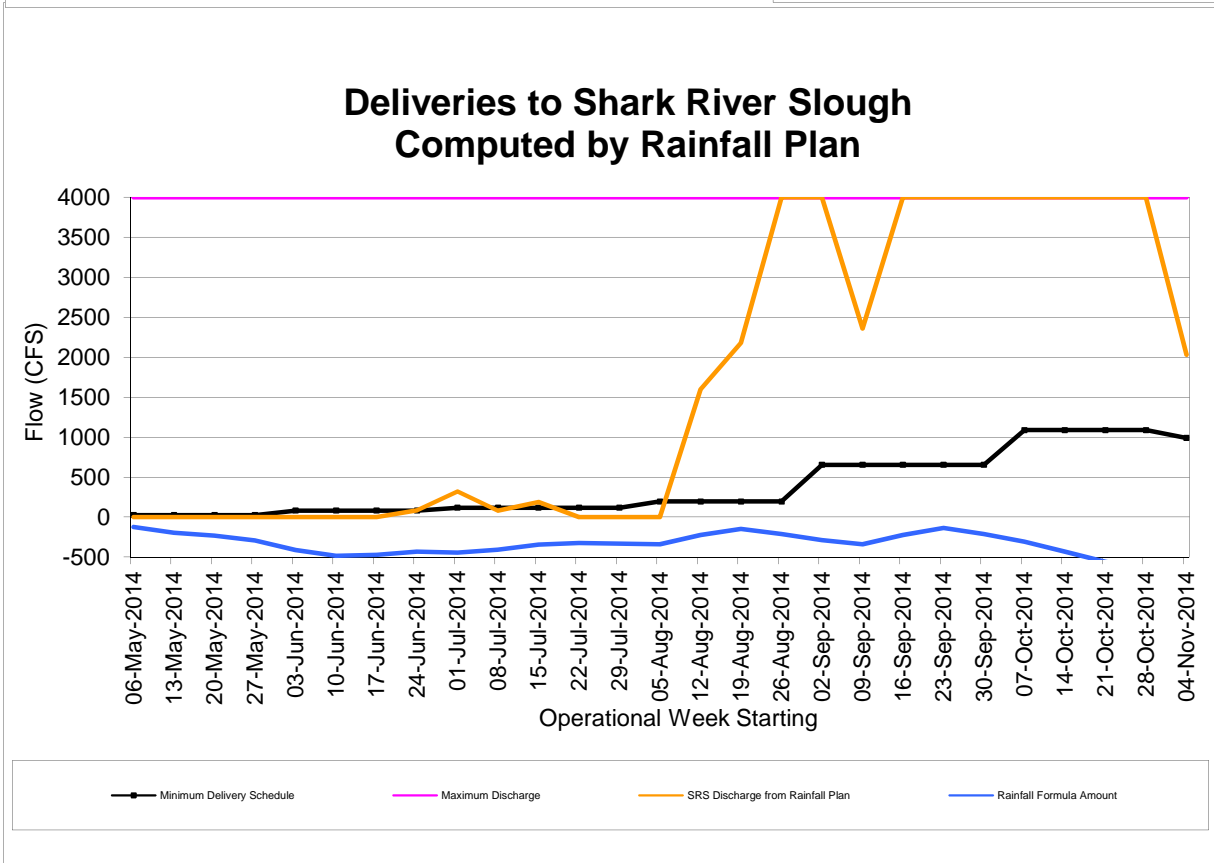
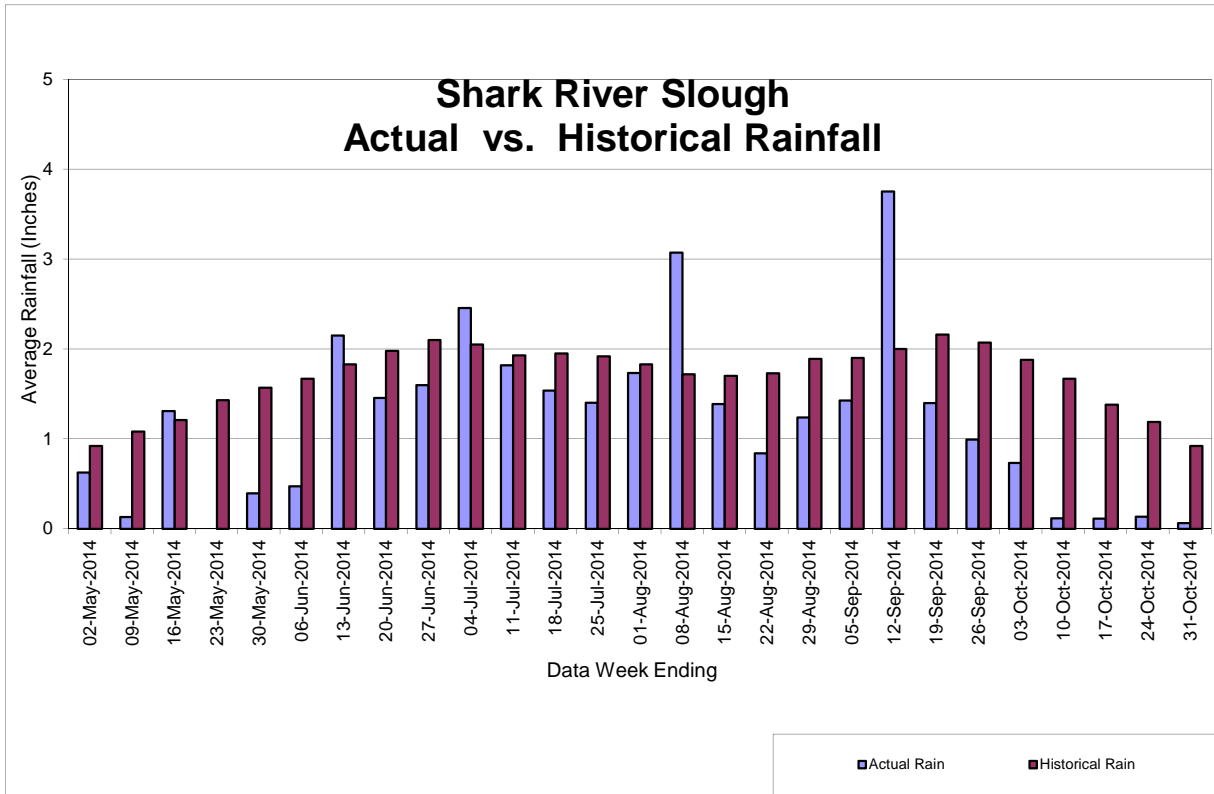
----- Statistical Parameters -----

Rainfall Formula Amount -707 cfs  
 Last Week's Rainfall Formula -652 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -2.23 RL2 -5.40 RL3 -0.55

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow **October 28, 2014** to **November 3, 2014** **MAX** cfs

S-12 Discharge MAX cfs  
 S-333 Discharge MAX cfs

----- **Data Summary** ----- **October 17, 2014** to **October 24, 2014**  
 WCA-3A Stage (end of week) 10.51 ft. msl  
 Angel's 6.52 ft. msl  
 G3273 6.95 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.13	1.11
S-140		1.38
ENP		M
-----		
This Week's Avg	0.13	1.25
Pre-Project Avg	1.19	1.06

----- **Transition Zone Information** -----

**WCA-3A is in Zone A**

Supplemental discharge is MAX cfs  
 Distance to Top of Zone E -0.56 feet  
 Distance to Bottom of Regulatory Zone -0.06 feet

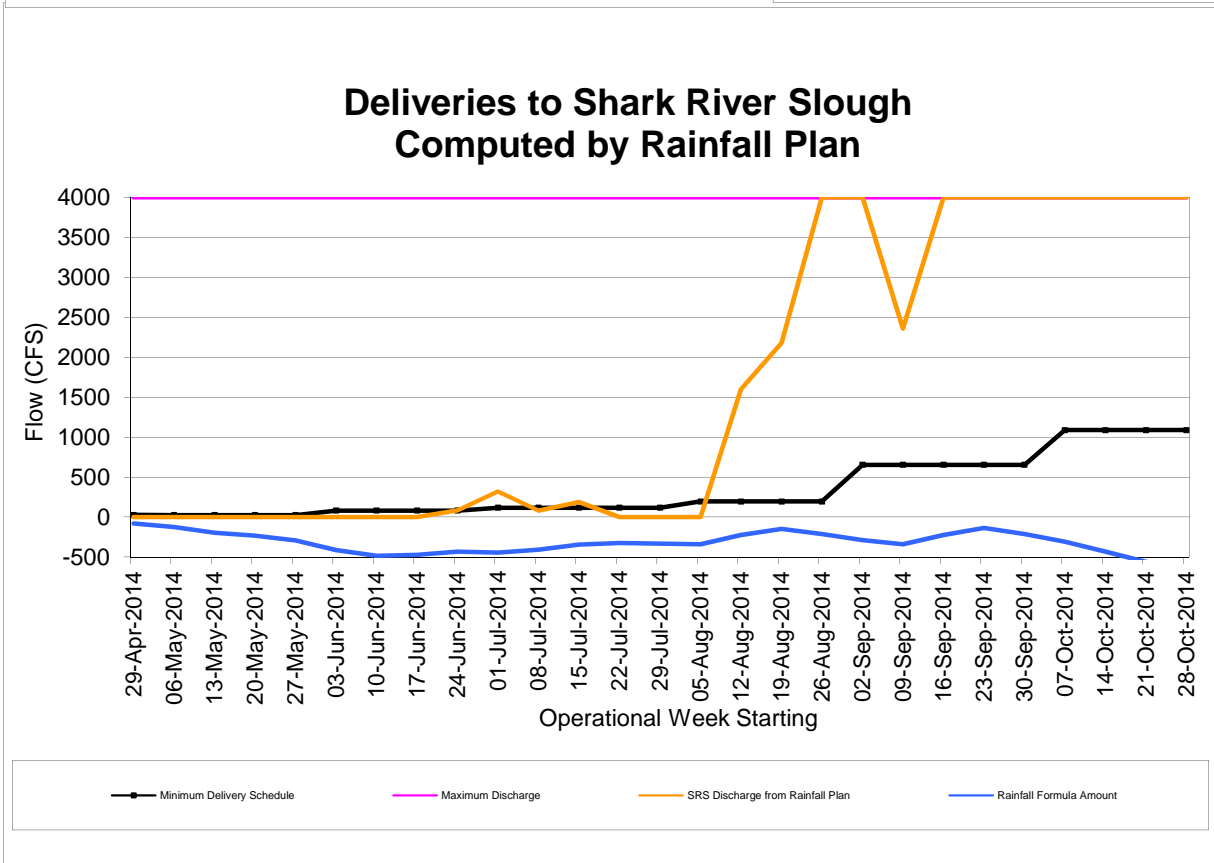
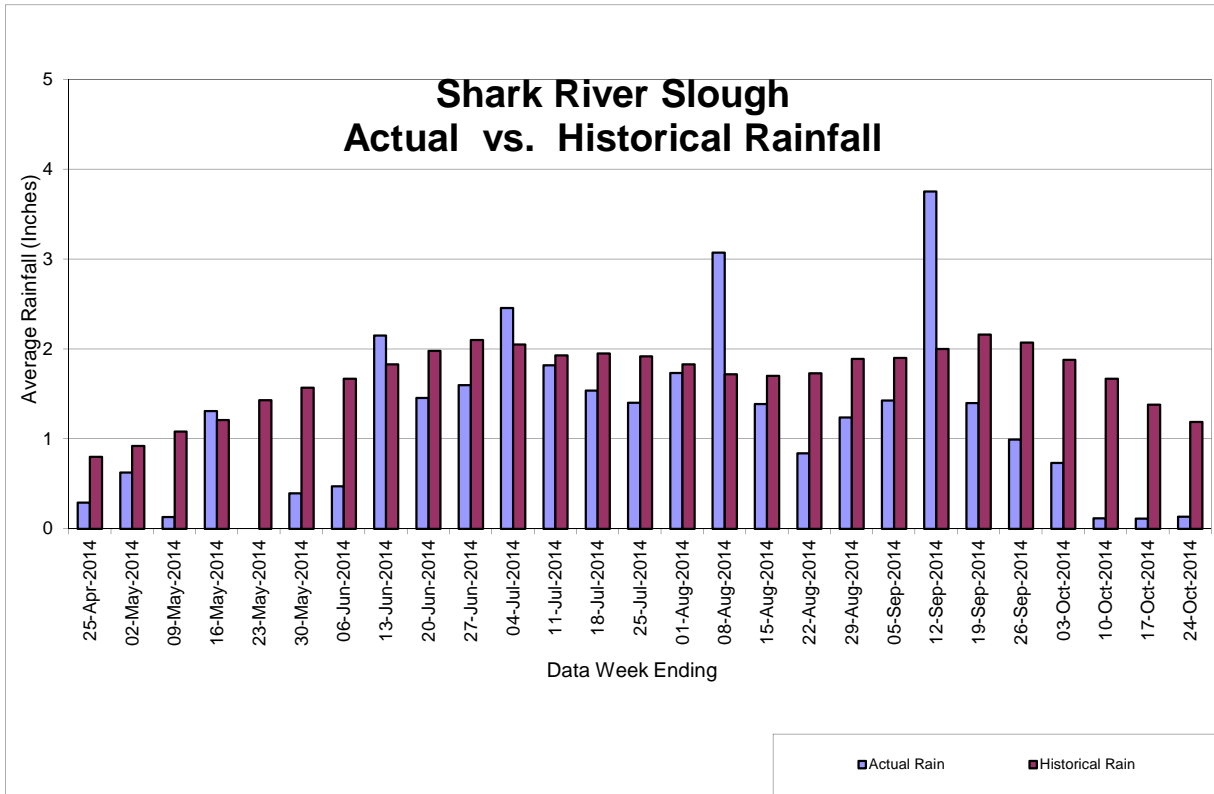
----- **Statistical Parameters** -----

Rainfall Formula Amount -652 cfs  
 Last Week's Rainfall Formula -560 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms RL1 -2.75 RL2 -4.67 RL3 -0.71

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow **October 21, 2014** to **October 27, 2014** **MAX** cfs

S-12 Discharge MAX cfs  
 S-333 Discharge MAX cfs

----- **Data Summary** ----- **October 10, 2014** to **October 17, 2014**  
 WCA-3A Stage (end of week) 10.57 ft. msl  
 Angel's 6.37 ft. msl  
 G3273 6.90 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.11	1.46
S-140		1.49
ENP		M
-----		
This Week's Avg	0.11	1.48
Pre-Project Avg	1.38	1.12

----- **Transition Zone Information** -----

**WCA-3A is in Zone A**

Supplemental discharge is MAX cfs  
 Distance to Top of Zone E -0.67 feet  
 Distance to Bottom of Regulatory Zone -0.16 feet

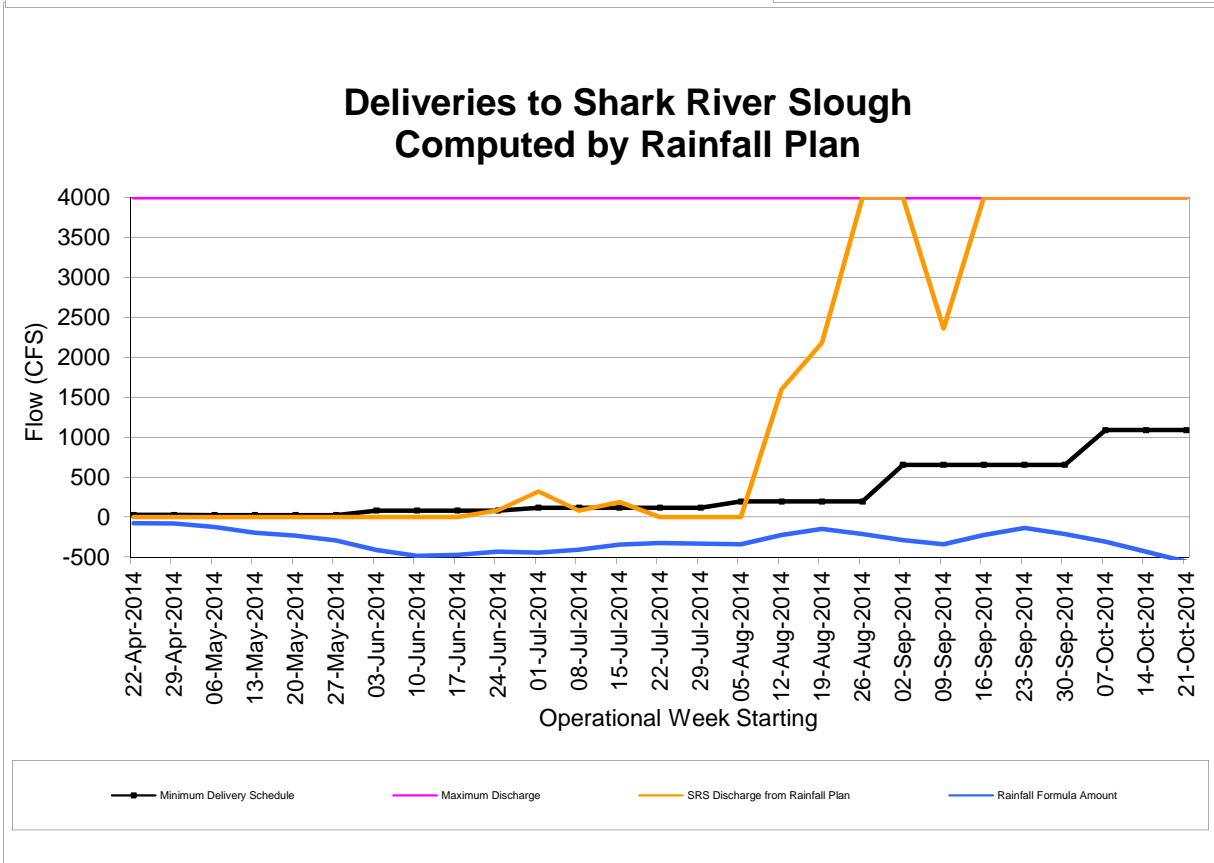
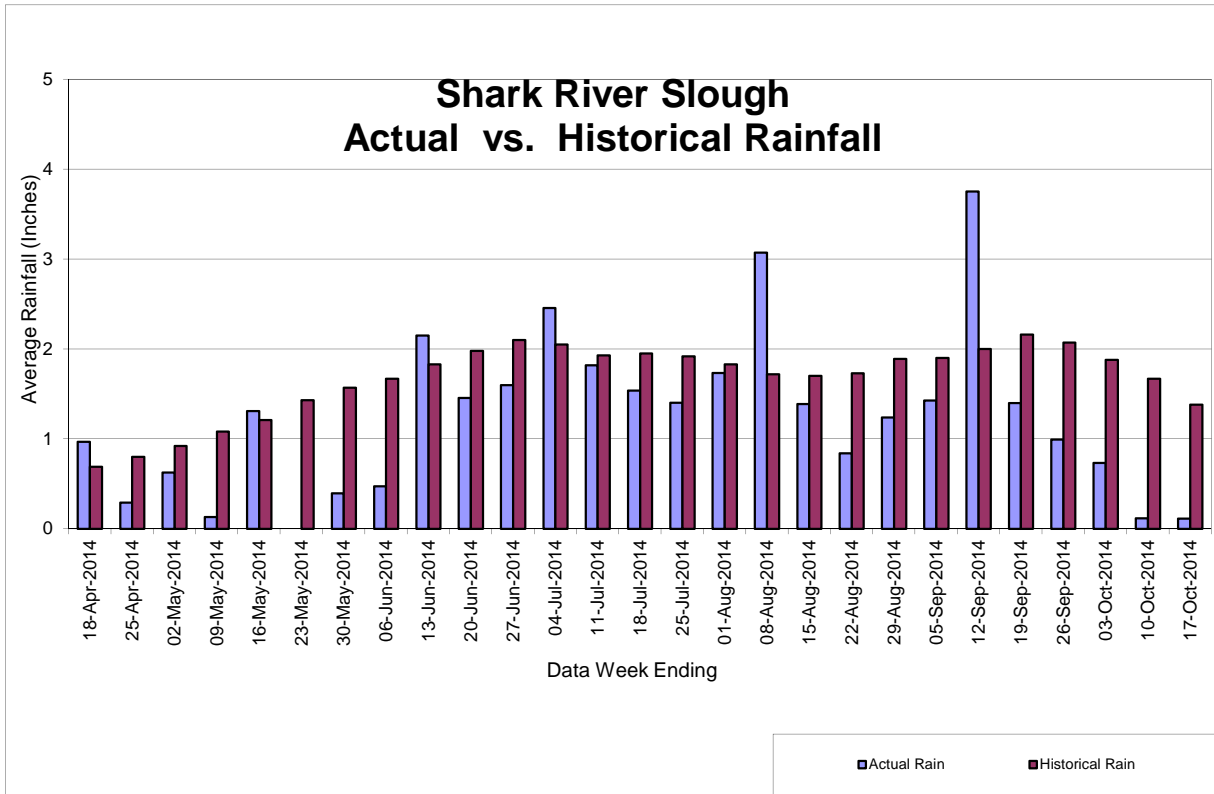
----- **Statistical Parameters** -----

Rainfall Formula Amount -560 cfs  
 Last Week's Rainfall Formula -432 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms RL1 -3.22 RL2 -1.28 RL3 -3.06

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow **October 14, 2014** to **October 20, 2014** **MAX** cfs

S-12 Discharge MAX cfs  
 S-333 Discharge MAX cfs

----- **Data Summary** -----  
**October 3, 2014** to **October 10, 2014**  
 WCA-3A Stage (end of week) 10.61 ft. msl  
 Angel's 6.77 ft. msl  
 G3273 7.00 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.12	1.22
S-140		1.40
ENP		M

This Week's Avg	0.12	1.31
Pre-Project Avg	1.67	1.16

----- **Transition Zone Information** -----

**WCA-3A is in Zone A**

Supplemental discharge is MAX cfs  
 Distance to Top of Zone E -0.75 feet  
 Distance to Bottom of Regulatory Zone -0.25 feet

----- **Statistical Parameters** -----

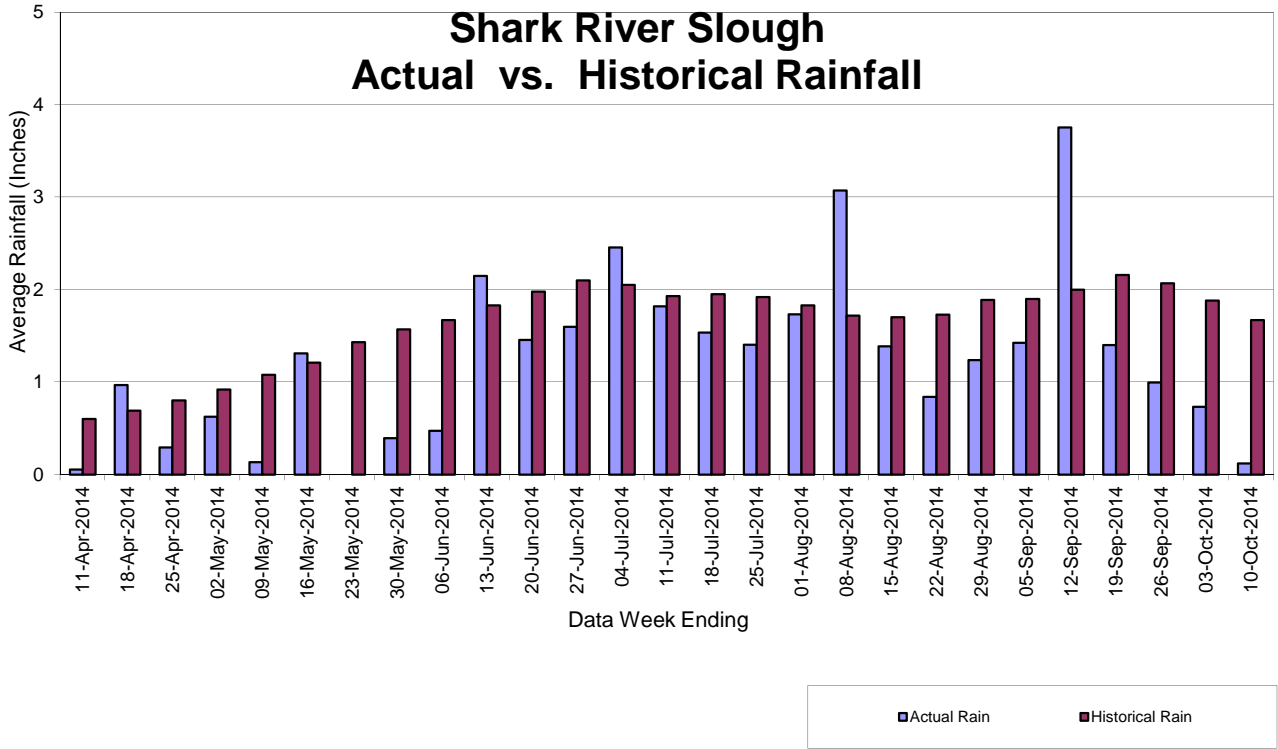
Rainfall Formula Amount -432 cfs  
 Last Week's Rainfall Formula -306 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -2.96 RL2 -0.56 RL3 -1.06

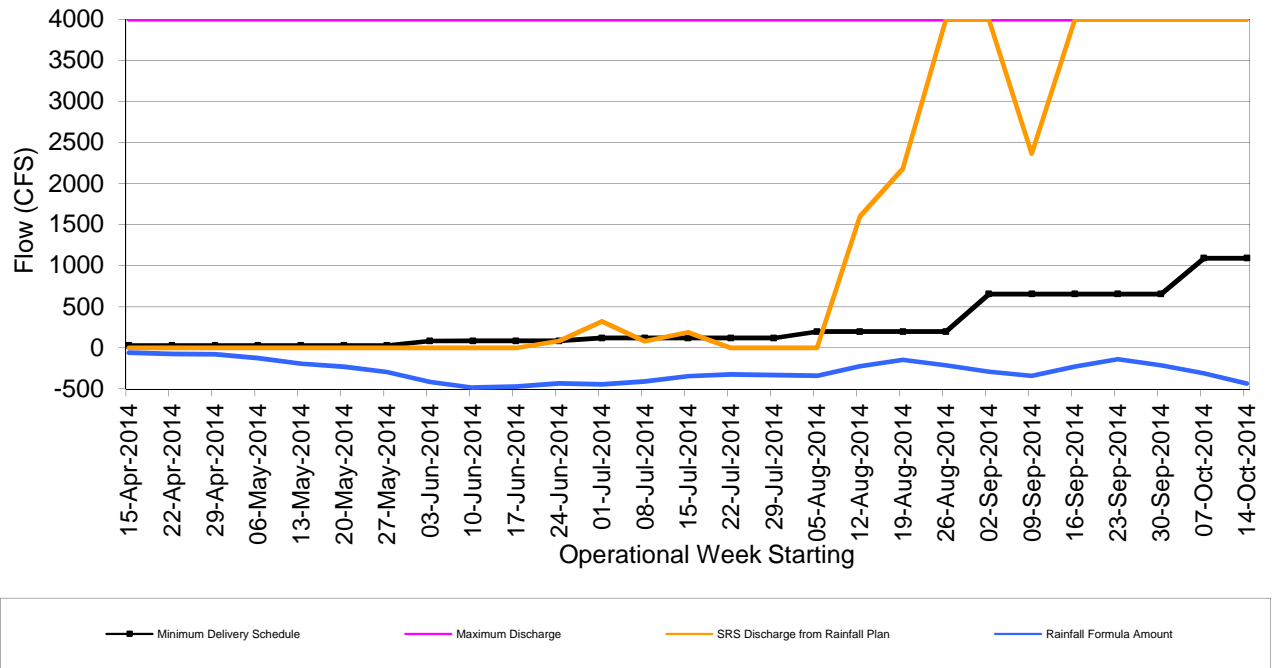
**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**

## Shark River Slough Actual vs. Historical Rainfall



## Deliveries to Shark River Slough Computed by Rainfall Plan





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow **October 7, 2014** to **October 13, 2014** **MAX** cfs

S-12 Discharge MAX cfs  
 S-333 Discharge MAX cfs

----- **Data Summary** ----- **September 26, 2014** to **October 3, 2014**  
 WCA-3A Stage (end of week) 10.62 ft. msl  
 Angel's 7.01 ft. msl  
 G3273 7.16 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.73	1.49
S-140		1.28
ENP		M

This Week's Avg	0.73	1.38
Pre-Project Avg	1.88	1.21

----- **Transition Zone Information** -----

**WCA-3A is in Zone A**

Supplemental discharge is MAX cfs  
 Distance to Top of Zone E -0.80 feet  
 Distance to Bottom of Regulatory Zone -0.30 feet

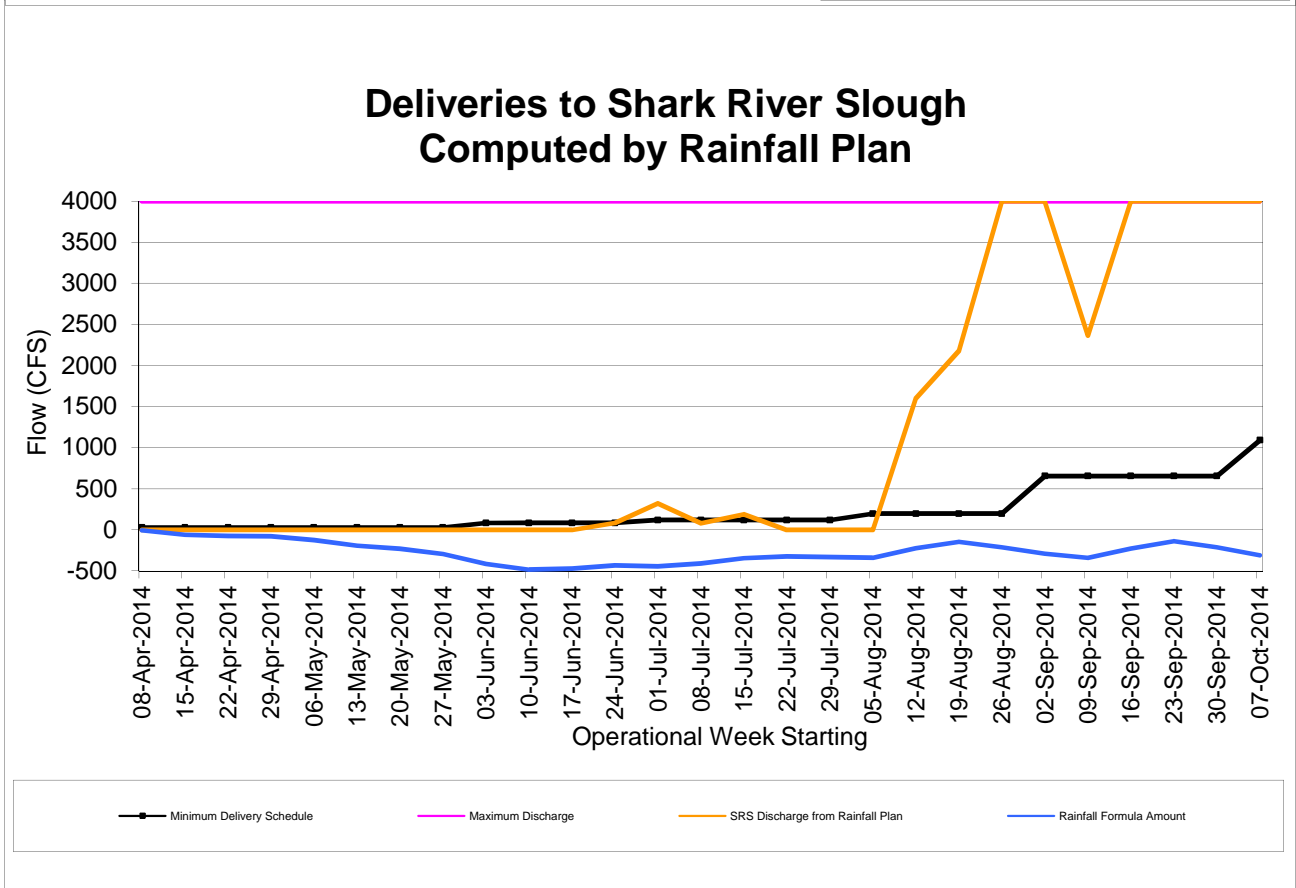
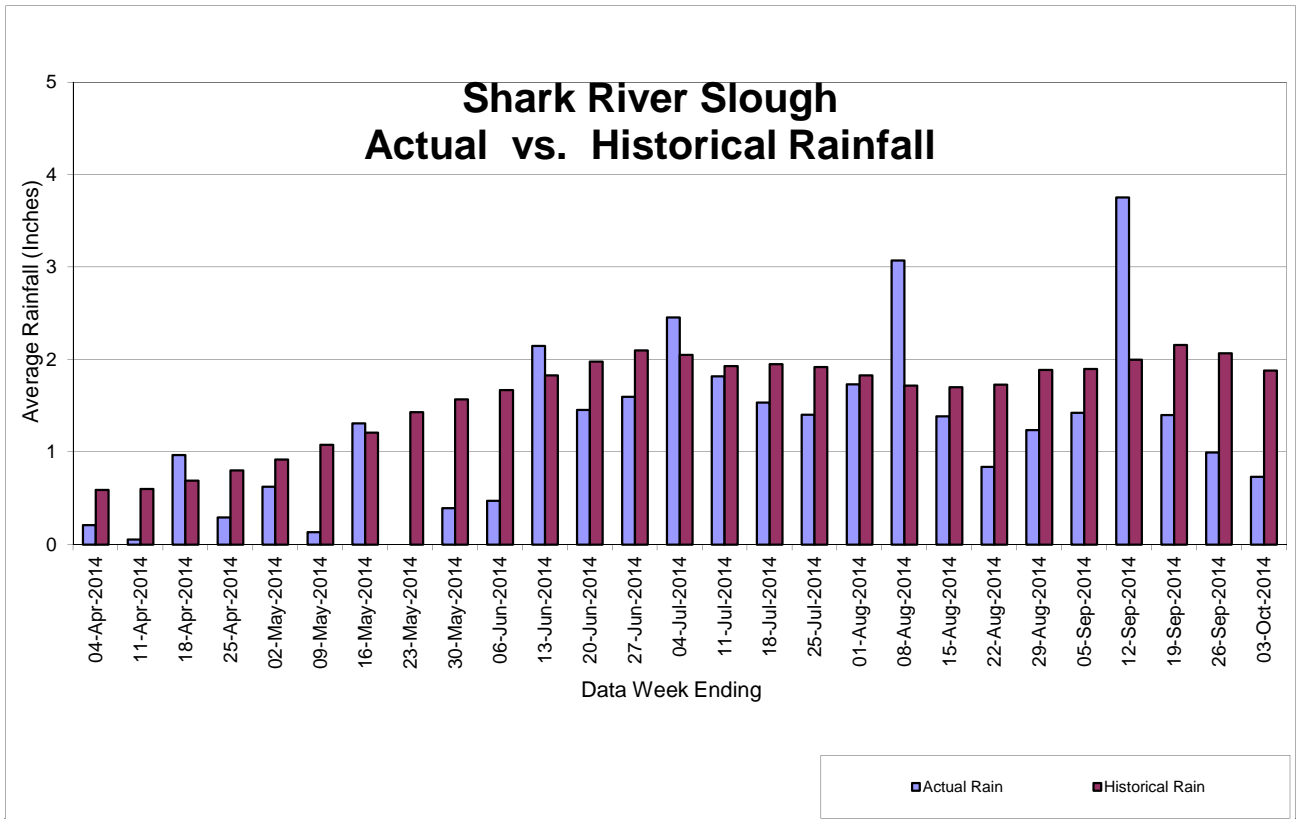
----- **Statistical Parameters** -----

Rainfall Formula Amount -306 cfs  
 Last Week's Rainfall Formula -212 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 **-2.18** RL2 **-0.55** RL3 **-0.39**

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow September 30, 2014 to October 6, 2014 MAX cfs

S-12 Discharge MAX cfs  
 S-333 Discharge MAX cfs

----- Data Summary ----- September 19, 2014 to September 26, 2014  
 WCA-3A Stage (end of week) 10.55 ft. msl  
 Angel's 6.91 ft. msl  
 G3273 7.08 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.99	1.08
S-140		0.97
ENP		M

This Week's Avg	0.99	1.02
Pre-Project Avg	2.07	1.25

----- Transition Zone Information -----

**WCA-3A is in Zone A**

Supplemental discharge is MAX cfs  
 Distance to Top of Zone E -0.78 feet  
 Distance to Bottom of Regulatory Zone -0.28 feet

----- Statistical Parameters -----

Rainfall Formula Amount -212 cfs  
 Last Week's Rainfall Formula -135 cfs  
 Pre-Project Mean Discharge 0 cfs

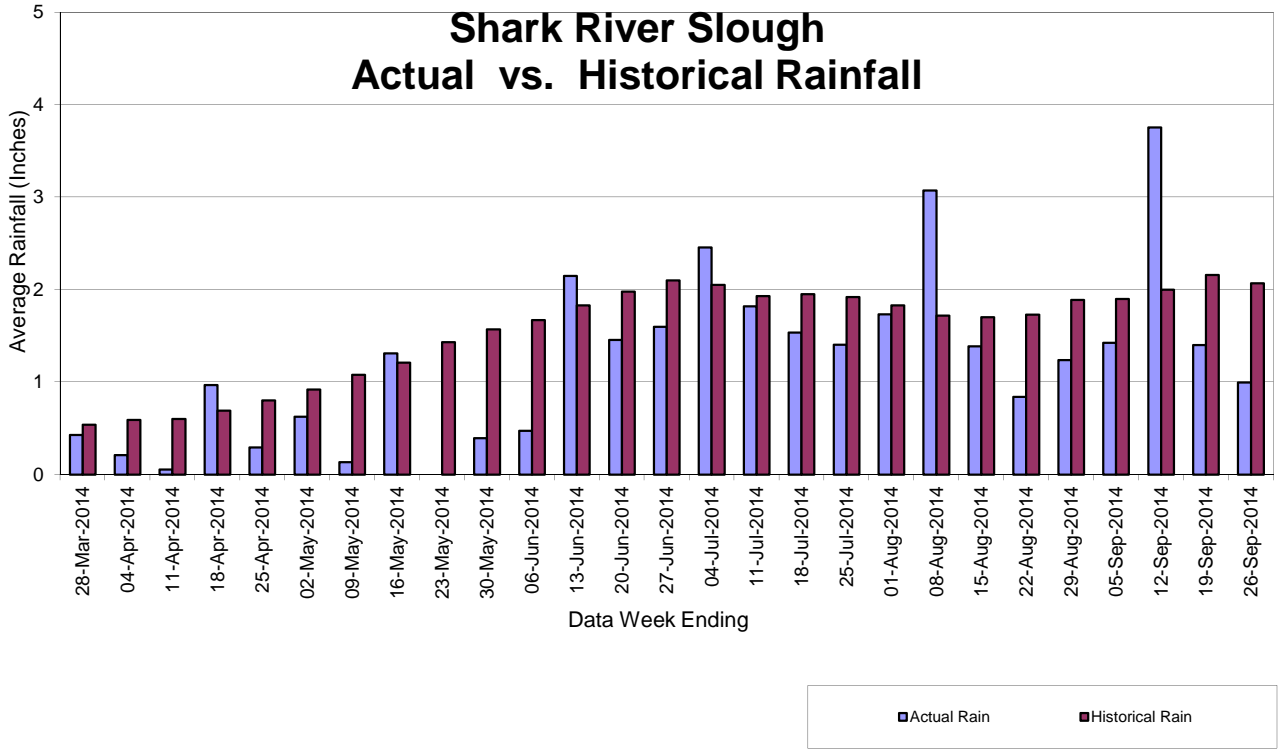
Rainfall Excess Terms

RL1 -1.71	RL2 -0.71	RL3 0.07
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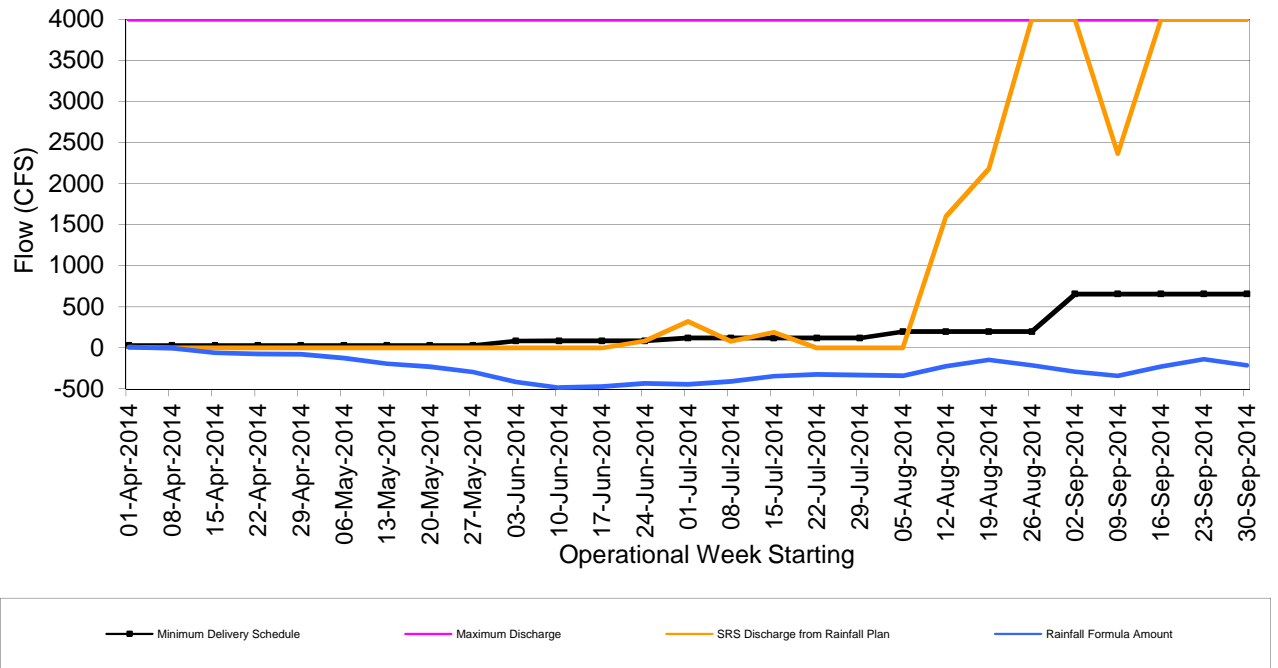
**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**

## Shark River Slough Actual vs. Historical Rainfall



## Deliveries to Shark River Slough Computed by Rainfall Plan



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow September 23, 2014 to September 29, 2014 **MAX** cfs

S-12 Discharge **MAX** cfs  
 S-333 Discharge **MAX** cfs

----- Data Summary ----- September 12, 2014 to September 19, 2014  
 WCA-3A Stage (end of week) 10.47 ft. msl  
 Angel's 6.78 ft. msl  
 G3273 7.03 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	1.40	1.30

S-140		1.39
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ENP		M
-----	--	---

This Week's Avg	1.40	1.35
Pre-Project Avg	2.16	1.27

### ----- Transition Zone Information -----

#### WCA-3A is in Zone A

Supplemental discharge is	<b>MAX</b>	cfs
Distance to Top of Zone E		-0.74 feet
Distance to Bottom of Regulatory Zone		-0.24 feet

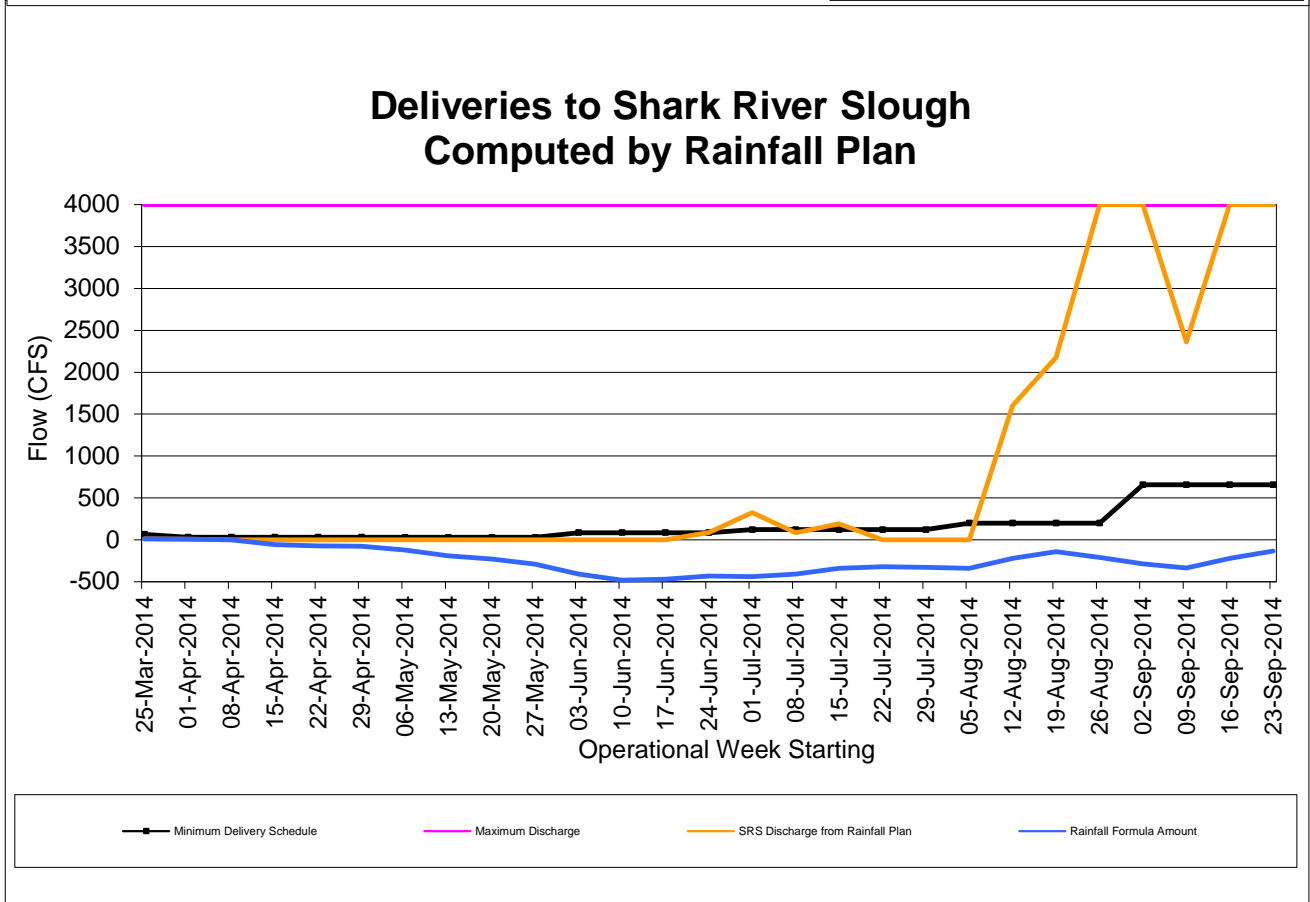
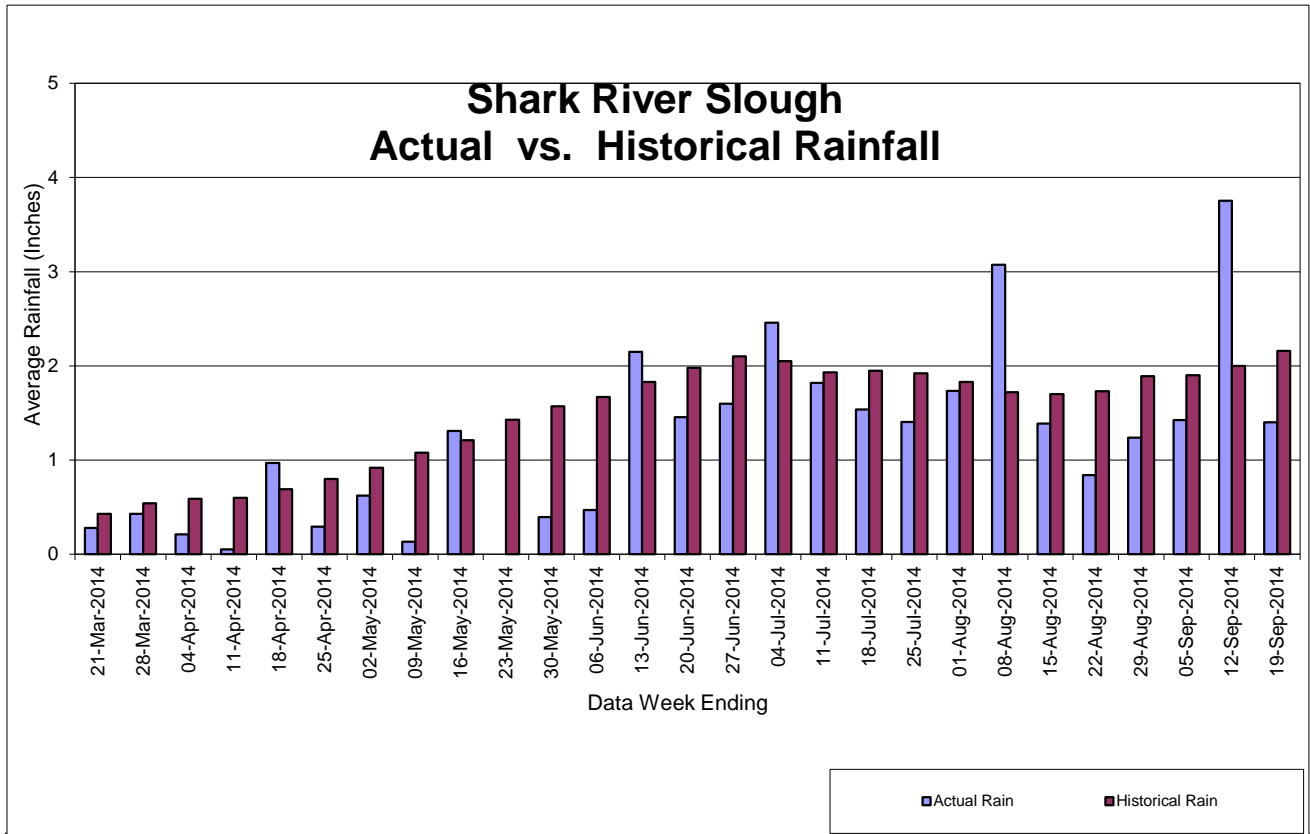
### ----- Statistical Parameters -----

Rainfall Formula Amount	-135 cfs
Last Week's Rainfall Formula	-224 cfs
Pre-Project Mean Discharge	0 cfs

Rainfall Excess Terms	RL1 0.90	RL2 -3.06	RL3 0.46
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**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow September 16, 2014 to September 22, 2014 **MAX** cfs

S-12 Discharge **MAX** cfs  
 S-333 Discharge **MAX** cfs

----- **Data Summary** ----- **September 5, 2014** to **September 12, 2014**

WCA-3A Stage (end of week)	<b>10.34</b>	ft. msl
Angel's	<b>6.49</b>	ft. msl
G3273	<b>6.86</b>	ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	<b>3.75</b>	<b>1.57</b>
S-140		<b>1.13</b>
ENP		<b>M</b>

This Week's Avg	<b>3.75</b>	<b>1.35</b>
Pre-Project Avg	<b>2.00</b>	<b>1.31</b>

----- **Transition Zone Information** -----

**WCA-3A is in Zone A**

Supplemental discharge is	<b>MAX</b>	cfs
Distance to Top of Zone E		-0.66 feet
Distance to Bottom of Regulatory Zone		-0.16 feet

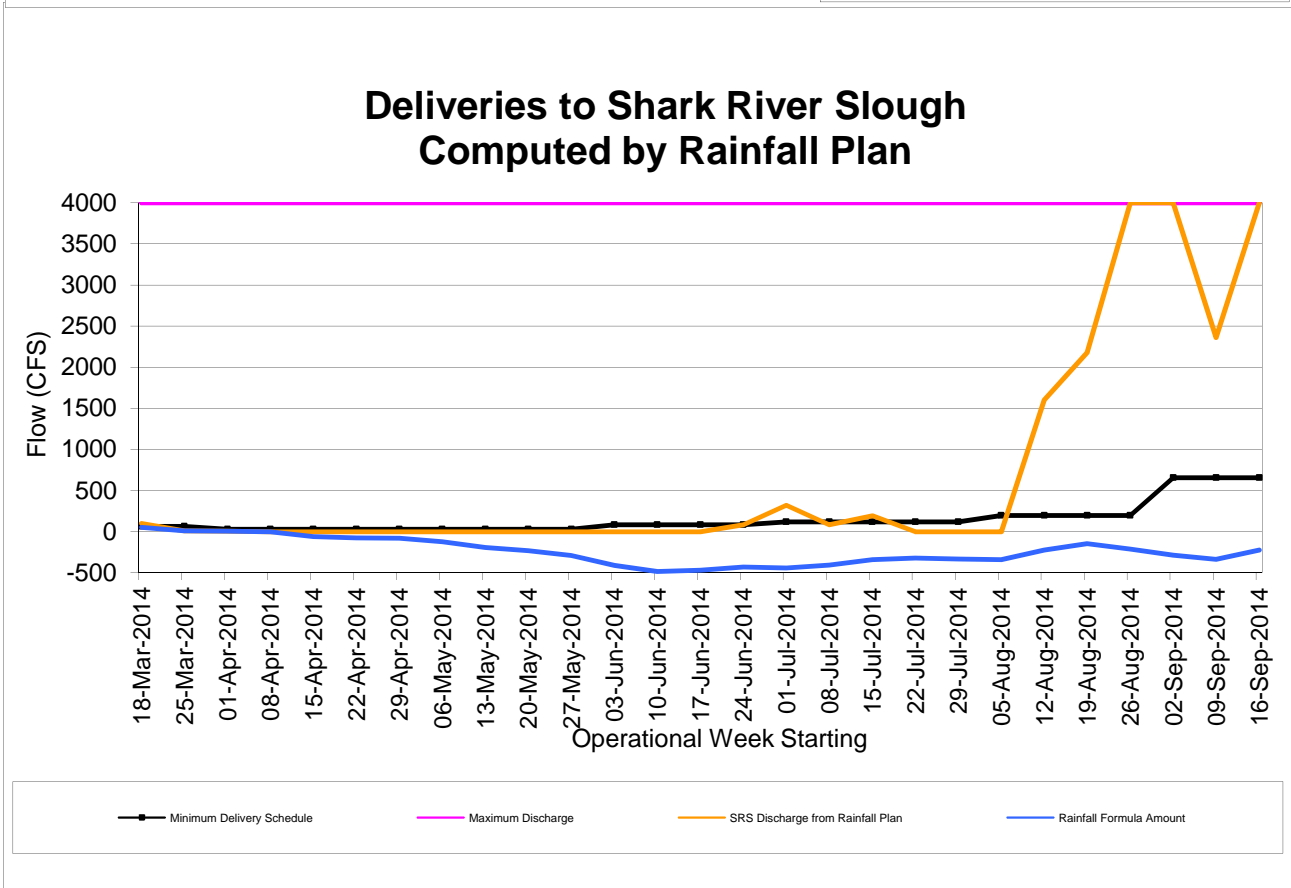
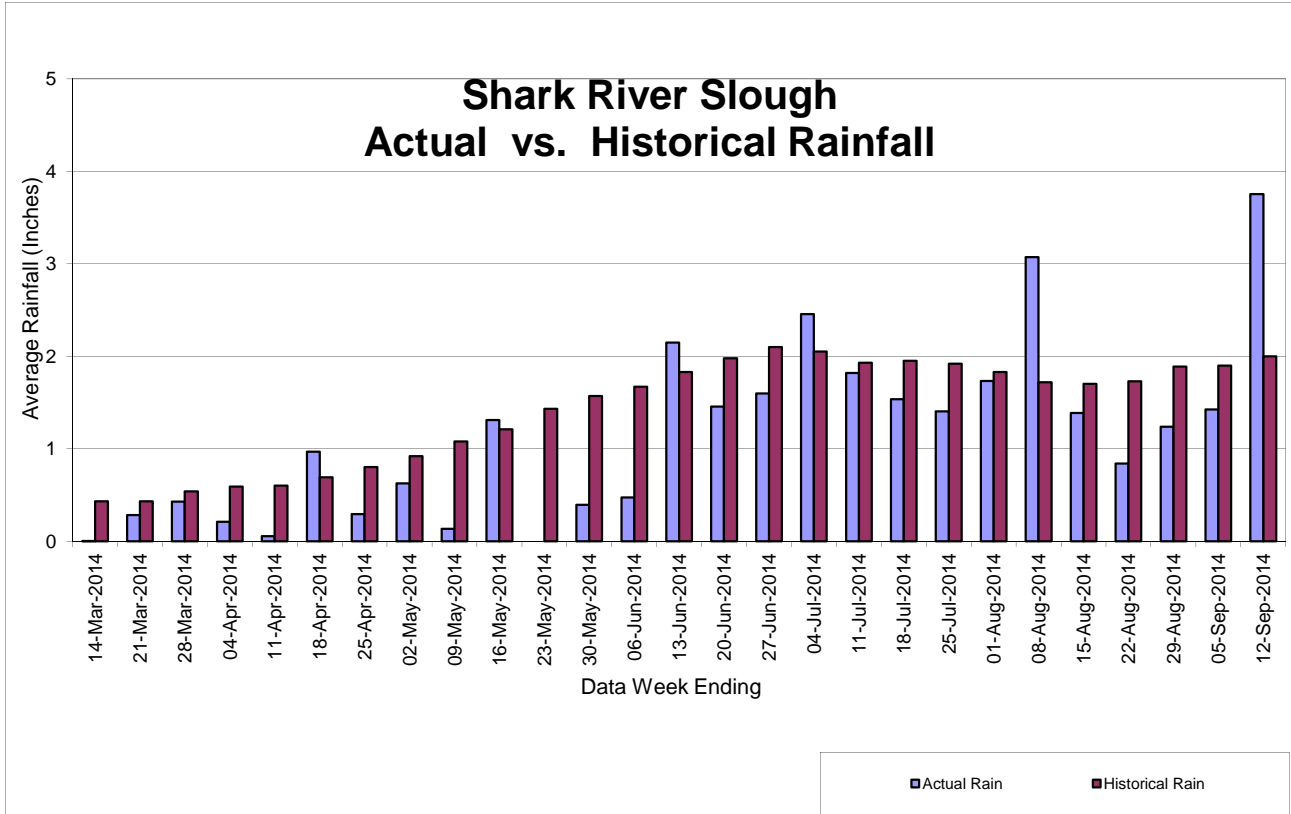
----- **Statistical Parameters** -----

Rainfall Formula Amount	-224 cfs
Last Week's Rainfall Formula	-337 cfs
Pre-Project Mean Discharge	0 cfs

Rainfall Excess Terms	RL1 <b>1.16</b>	RL2 <b>-1.06</b>	RL3 <b>-0.99</b>
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**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow September 9, 2014 to September 15, 2014 2361 cfs

S-12 Discharge 1063 cfs  
 S-333 Discharge 1299 cfs

----- Data Summary -----  
 August 29, 2014 to September 5, 2014  
 WCA-3A Stage (end of week) 10.11 ft. msl  
 Angel's 5.92 ft. msl  
 G3273 6.50 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	1.43	1.50
S-140		1.39
ENP		M

This Week's Avg	1.43	1.45
Pre-Project Avg	1.90	1.34

----- Transition Zone Information -----

**WCA-3A is in Zone D**

Supplemental discharge is 2361 cfs  
 Distance to Top of Zone E -0.47 feet  
 Distance to Bottom of Regulatory Zone 0.02 feet

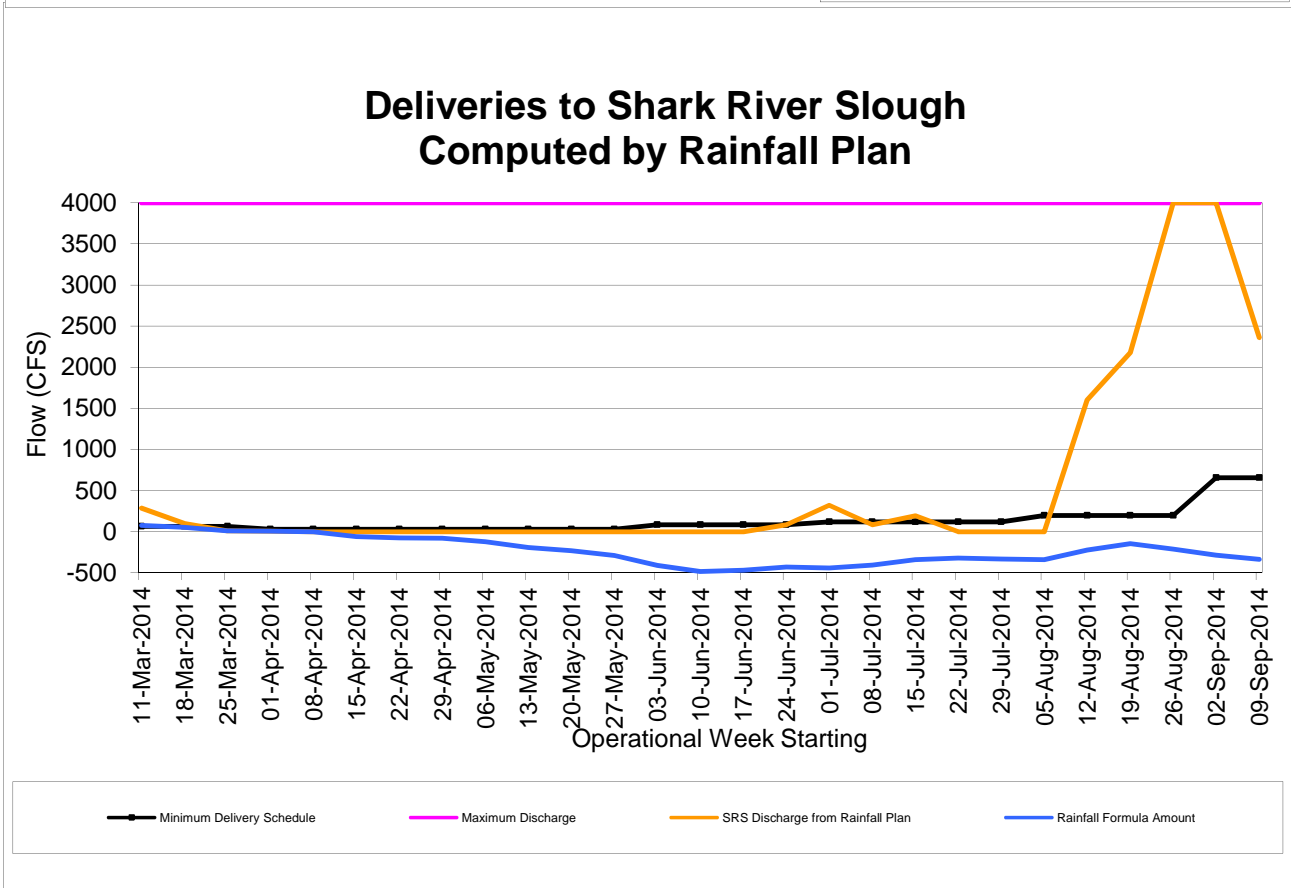
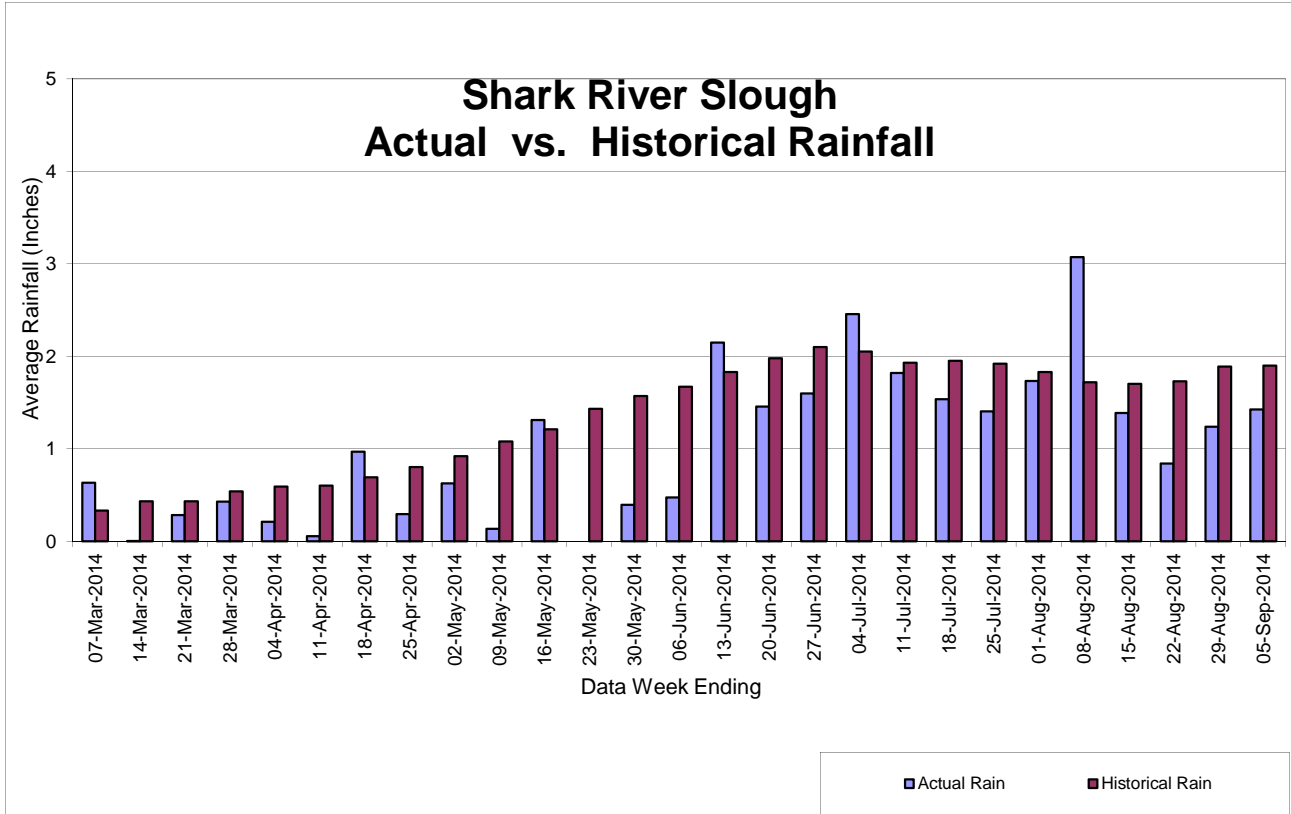
----- Statistical Parameters -----

Rainfall Formula Amount -337 cfs  
 Last Week's Rainfall Formula -288 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -1.45 RL2 -0.39 RL3 -0.34

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow September 2, 2014 to September 8, 2014 **MAX** cfs

S-12 Discharge **MAX** cfs  
 S-333 Discharge **MAX** cfs

----- Data Summary -----  
 August 22, 2014 to August 29, 2014  
 WCA-3A Stage (end of week) 10.10 ft. msl  
 Angel's 6.04 ft. msl  
 G3273 6.66 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	1.24	1.83
S-140		1.49
ENP		M

This Week's Avg	1.24	1.66
Pre-Project Avg	1.89	1.36

----- Transition Zone Information -----

**WCA-3A is in Zone A**

Supplemental discharge is **MAX** cfs  
 Distance to Top of Zone E -0.51 feet  
 Distance to Bottom of Regulatory Zone -0.01 feet

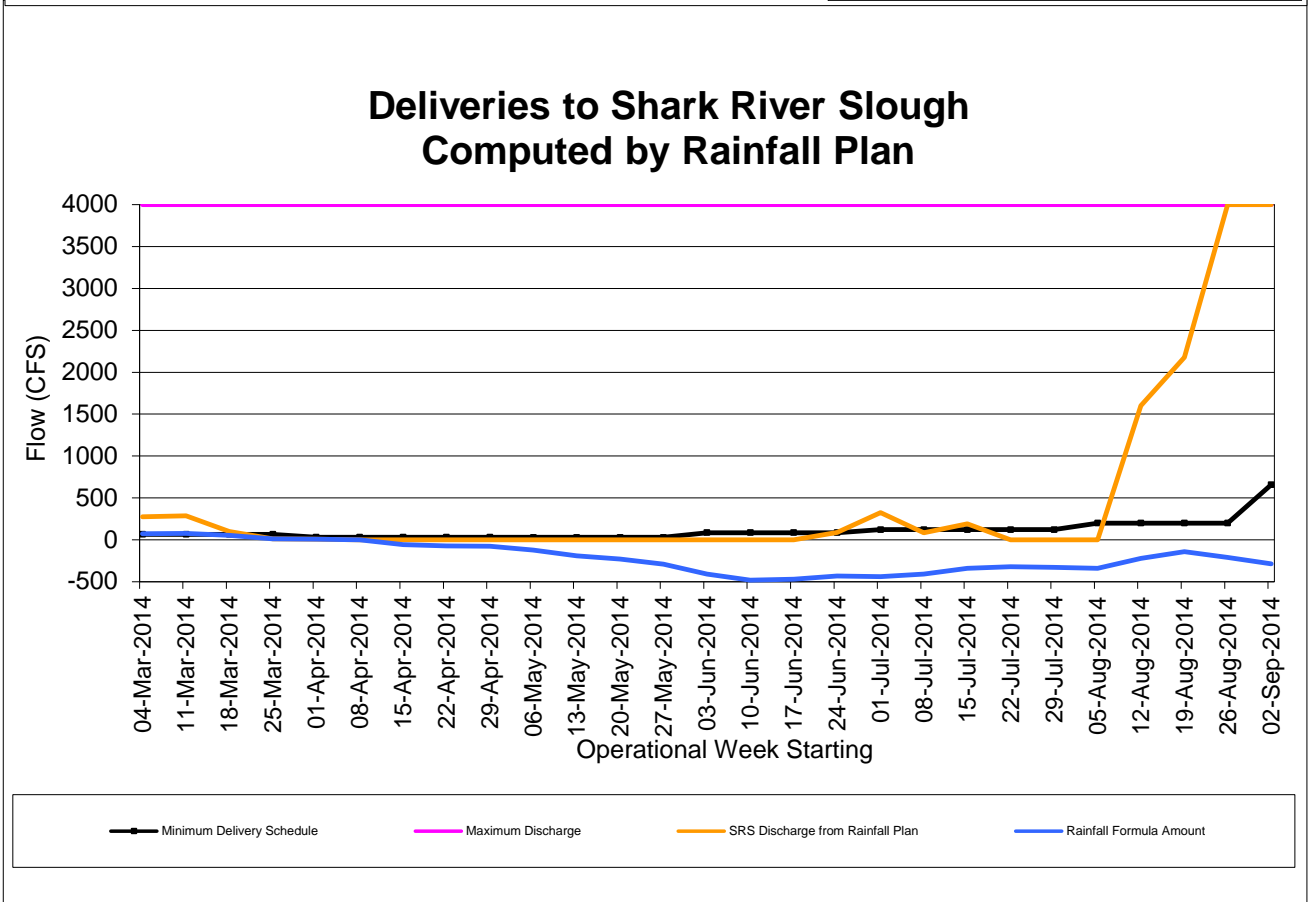
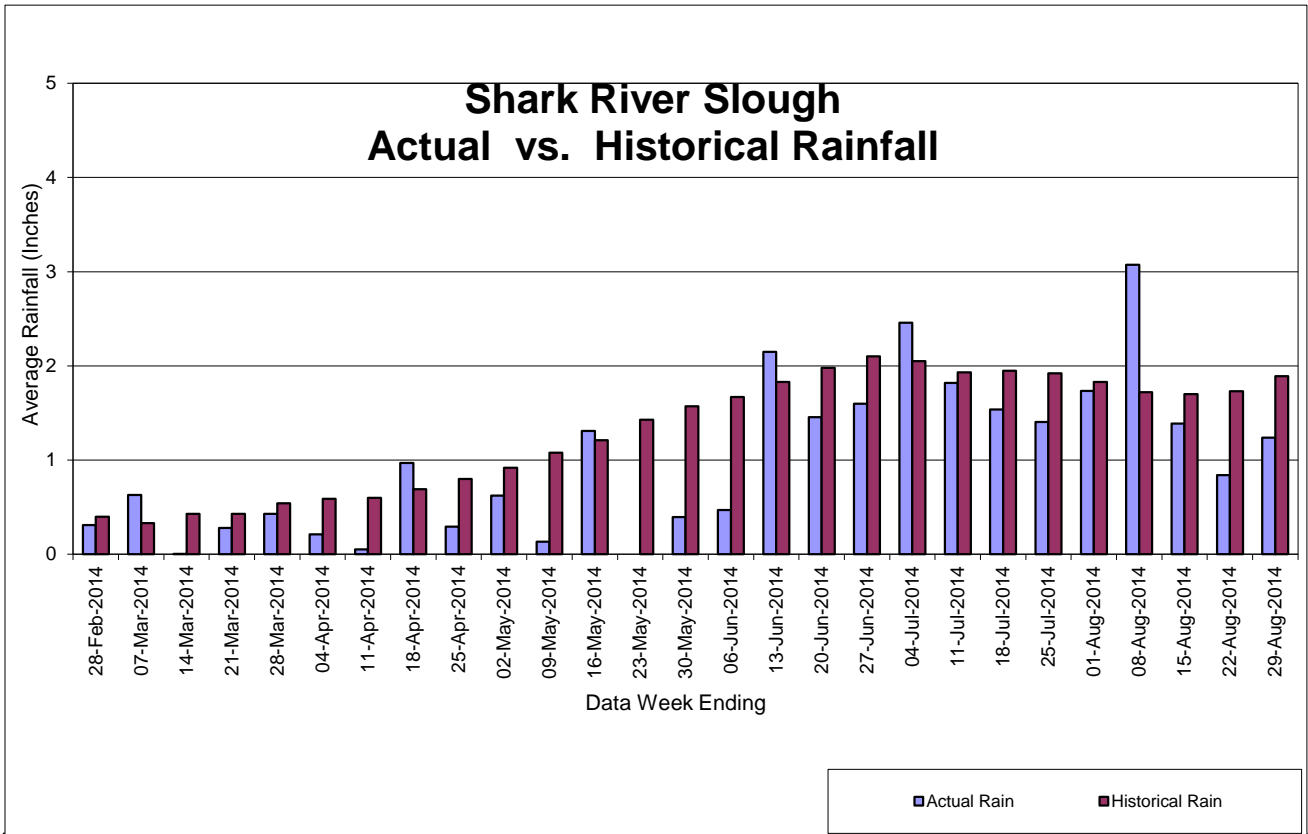
----- Statistical Parameters -----

Rainfall Formula Amount -288 cfs  
 Last Week's Rainfall Formula -210 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -1.87 RL2 0.07 RL3 -0.38

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow August 26, 2014 to September 1, 2014 **MAX** cfs

S-12 Discharge MAX cfs  
 S-333 Discharge MAX cfs

----- Data Summary -----  
 August 15, 2014 to August 22, 2014  
 WCA-3A Stage (end of week) 10.06 ft. msl  
 Angel's 6.77 ft. msl  
 G3273 6.98 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.84	1.38
S-140		1.65
ENP		M
-----		
This Week's Avg	0.84	1.51
Pre-Project Avg	1.73	1.40

----- Transition Zone Information -----

**WCA-3A is in Zone A**

Supplemental discharge is MAX cfs  
 Distance to Top of Zone E -0.51 feet  
 Distance to Bottom of Regulatory Zone -0.02 feet

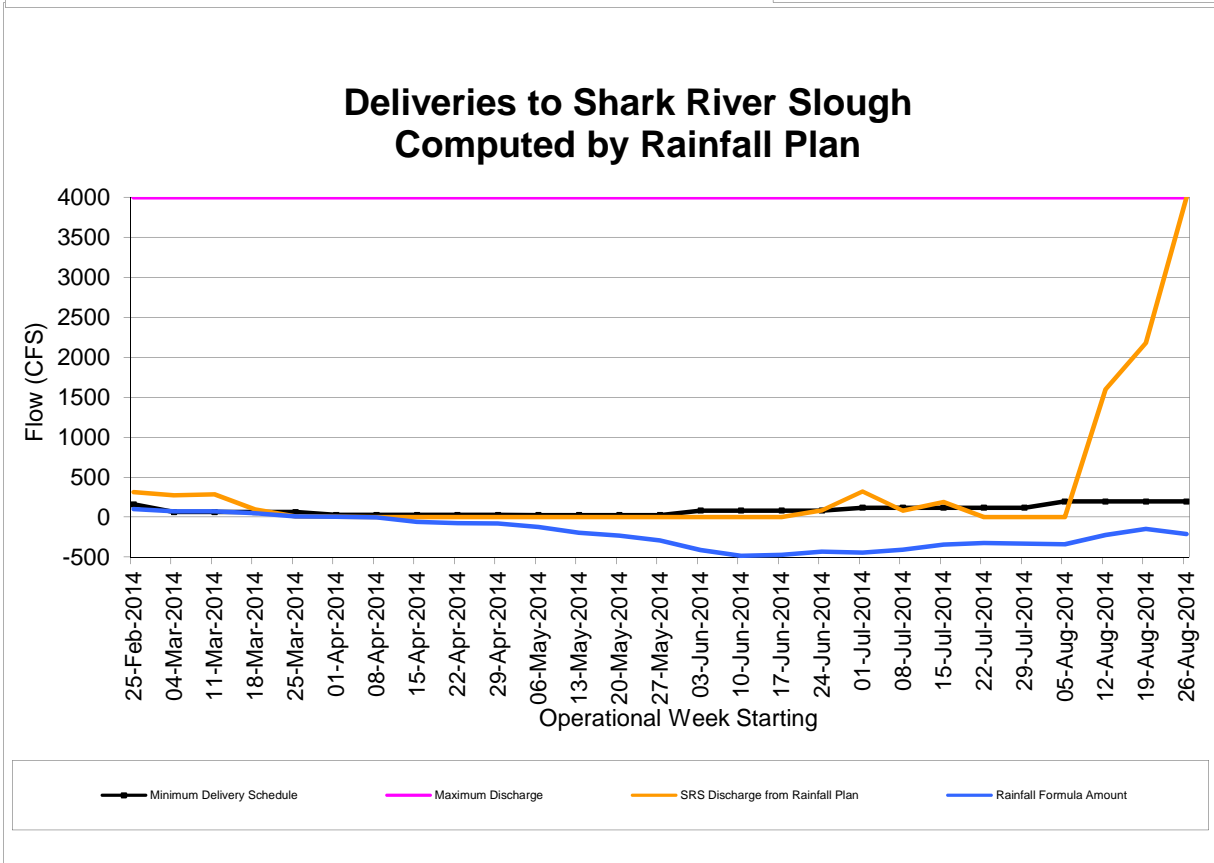
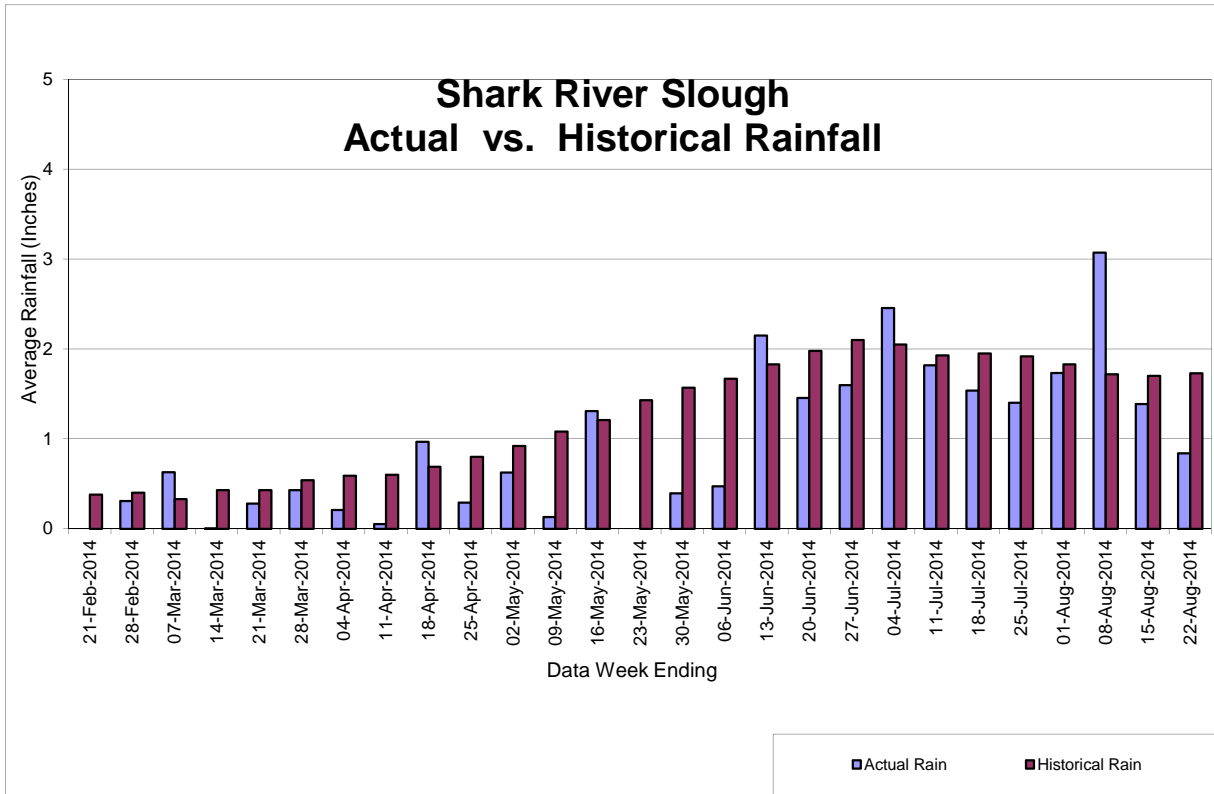
----- Statistical Parameters -----

Rainfall Formula Amount -210 cfs  
 Last Week's Rainfall Formula -144 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -1.61 RL2 0.46 RL3 -0.57

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow August 19, 2014 to August 25, 2014 2179 cfs

S-12 Discharge 980 cfs  
 S-333 Discharge 1198 cfs

----- Data Summary -----  
 August 8, 2014 to August 15, 2014  
 WCA-3A Stage (end of week) 9.94 ft. msl  
 Angel's 6.77 ft. msl  
 G3273 6.98 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	1.39	1.76
S-140		1.80
ENP		M
-----		
This Week's Avg	1.39	1.78
Pre-Project Avg	1.70	1.39

----- Transition Zone Information -----

**WCA-3A is in Zone D**

Supplemental discharge is 2179 cfs  
 Distance to Top of Zone E -0.44 feet  
 Distance to Bottom of Regulatory Zone 0.06 feet

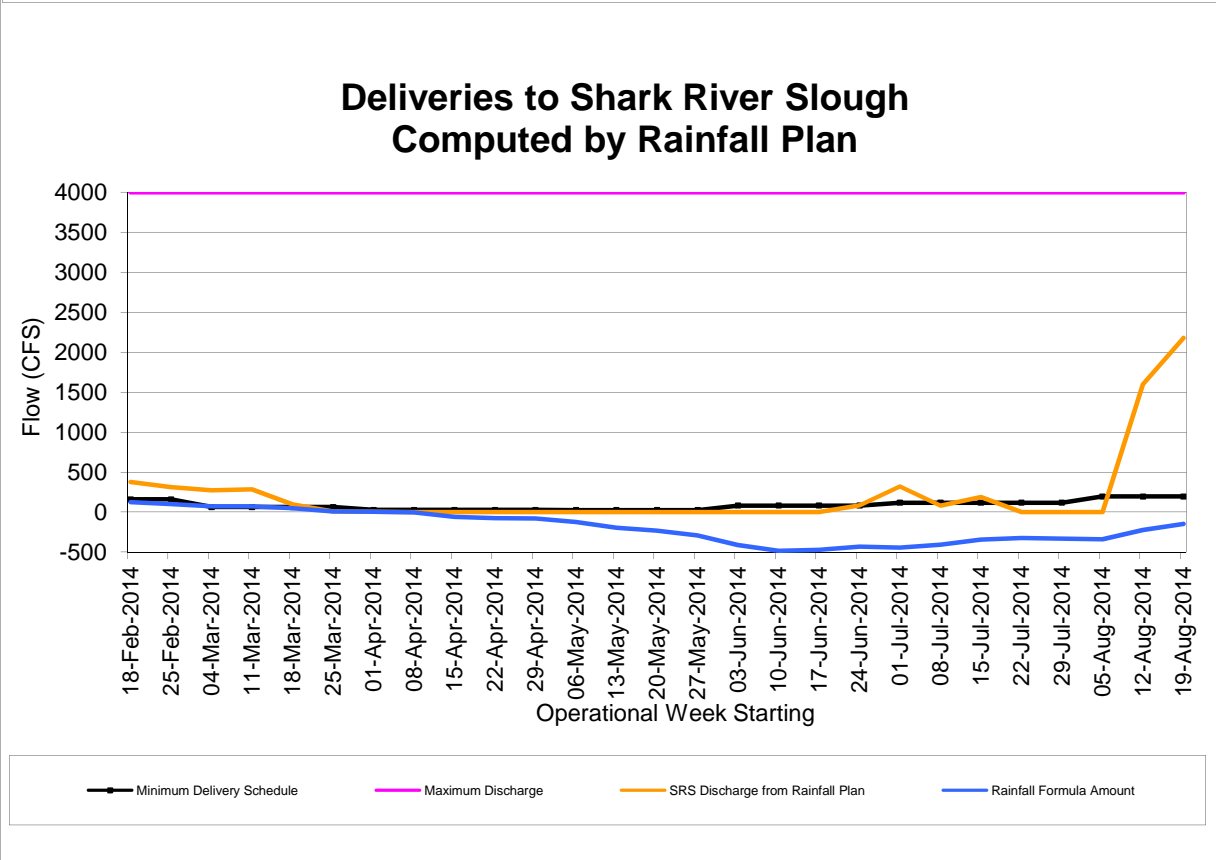
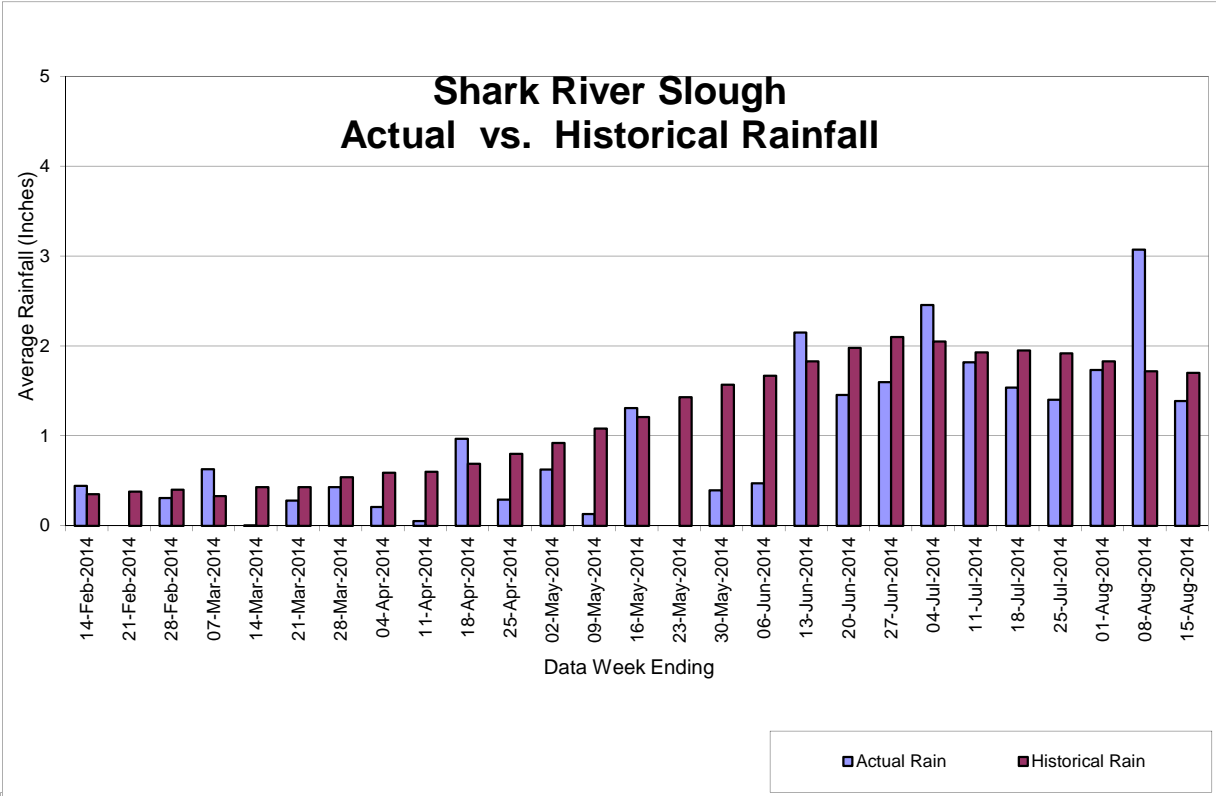
----- Statistical Parameters -----

Rainfall Formula Amount -144 cfs  
 Last Week's Rainfall Formula -222 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 0.81 RL2 -0.99 RL3 -0.23

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow August 12, 2014 to August 18, 2014 1601 cfs

S-12 Discharge 721 cfs  
 S-333 Discharge 881 cfs

----- Data Summary -----  
 August 1, 2014 to August 8, 2014  
 WCA-3A Stage (end of week) 9.78 ft. msl  
 Angel's 6.78 ft. msl  
 G3273 6.98 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	3.07	1.13
S-140		1.50
ENP		M
-----		
This Week's Avg	3.07	1.32
Pre-Project Avg	1.72	1.42

----- Transition Zone Information -----

**WCA-3A is in Zone D**

Supplemental discharge is 1601 cfs  
 Distance to Top of Zone E -0.32 feet  
 Distance to Bottom of Regulatory Zone 0.17 feet

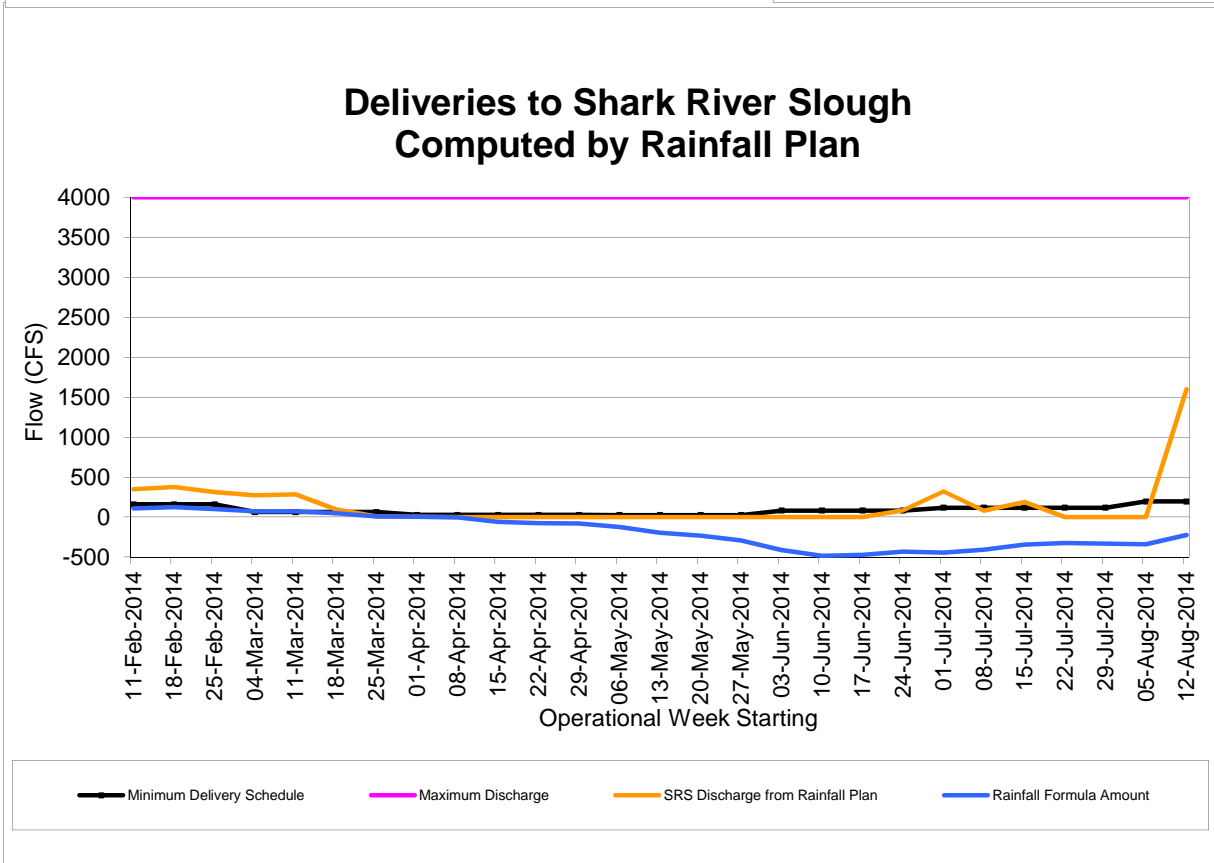
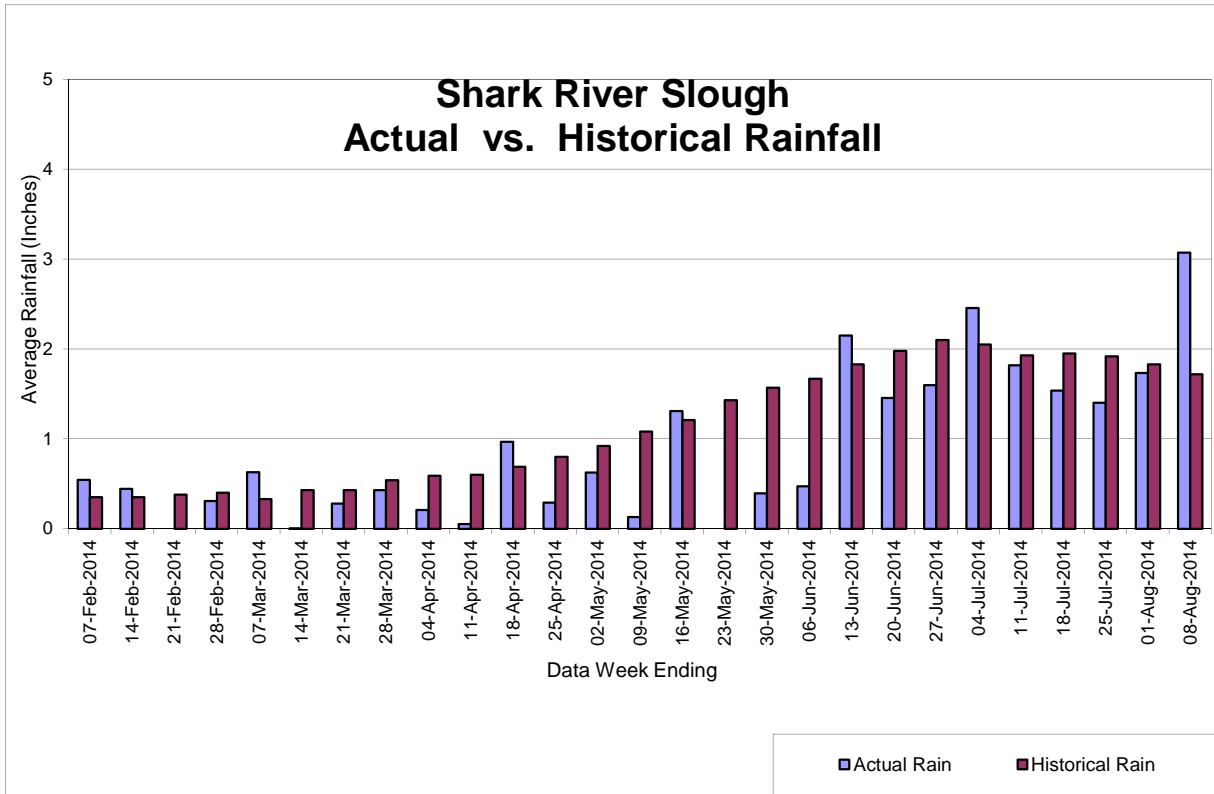
----- Statistical Parameters -----

Rainfall Formula Amount -222 cfs  
 Last Week's Rainfall Formula -339 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 1.21 RL2 -0.34 RL3 -1.57

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow August 5, 2014 to August 11, 2014 0 cfs

S-12 Discharge 0 cfs  
 S-333 Discharge 0 cfs

----- Data Summary -----  
 WCA-3A Stage (end of week) July 25, 2014 to August 1, 2014  
 Angel's 9.39 ft. msl  
 G3273 6.80 ft. msl  
6.92 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	1.73	1.58
S-140		1.58
ENP		M

	1.73	1.58
This Week's Avg	1.83	1.42
Pre-Project Avg		

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is 0 cfs  
 Distance to Top of Zone E 0.03 feet  
 Distance to Bottom of Regulatory Zone 0.52 feet

----- Statistical Parameters -----

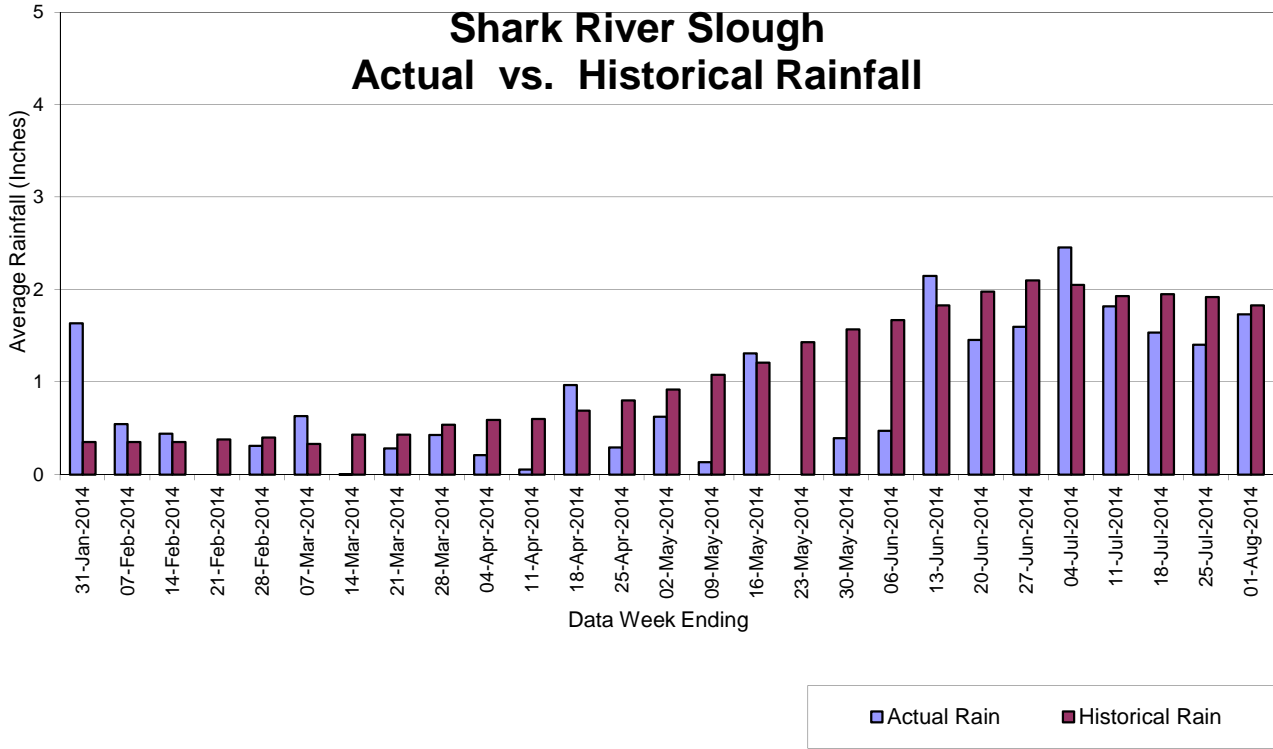
Rainfall Formula Amount -339 cfs  
 Last Week's Rainfall Formula -331 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -0.75 RL2 -0.38 RL3 -2.24

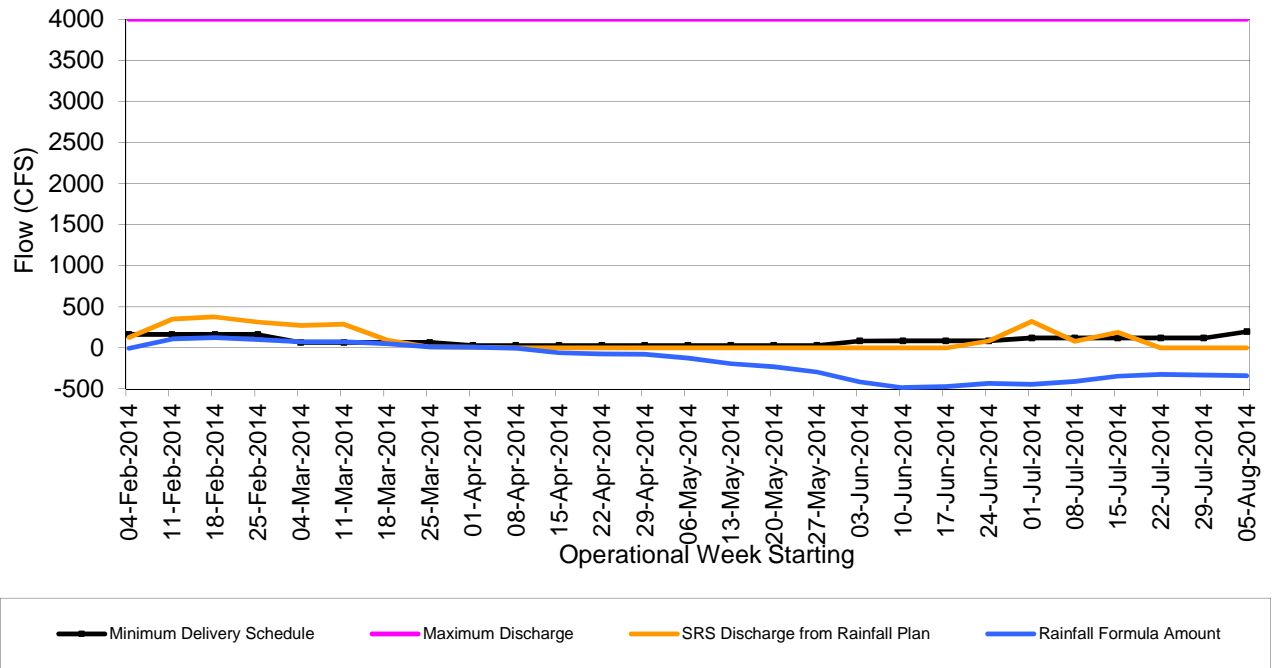
**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**

## Shark River Slough Actual vs. Historical Rainfall



## Deliveries to Shark River Slough Computed by Rainfall Plan



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow July 29, 2014 to August 4, 2014 0 cfs

S-12 Discharge 0 cfs  
 S-333 Discharge 0 cfs

----- Data Summary -----

July 18, 2014 to July 25, 2014

WCA-3A Stage (end of week) 9.30 ft. msl  
 Angel's 6.46 ft. msl  
 G3273 6.78 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	1.40	1.34
S-140		1.52
ENP		M

This Week's Avg	1.40	1.43
Pre-Project Avg	1.92	1.42

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is 0 cfs  
 Distance to Top of Zone E 0.07 feet  
 Distance to Bottom of Regulatory Zone 0.56 feet

----- Statistical Parameters -----

Rainfall Formula Amount -331 cfs  
 Last Week's Rainfall Formula -322 cfs  
 Pre-Project Mean Discharge 0 cfs

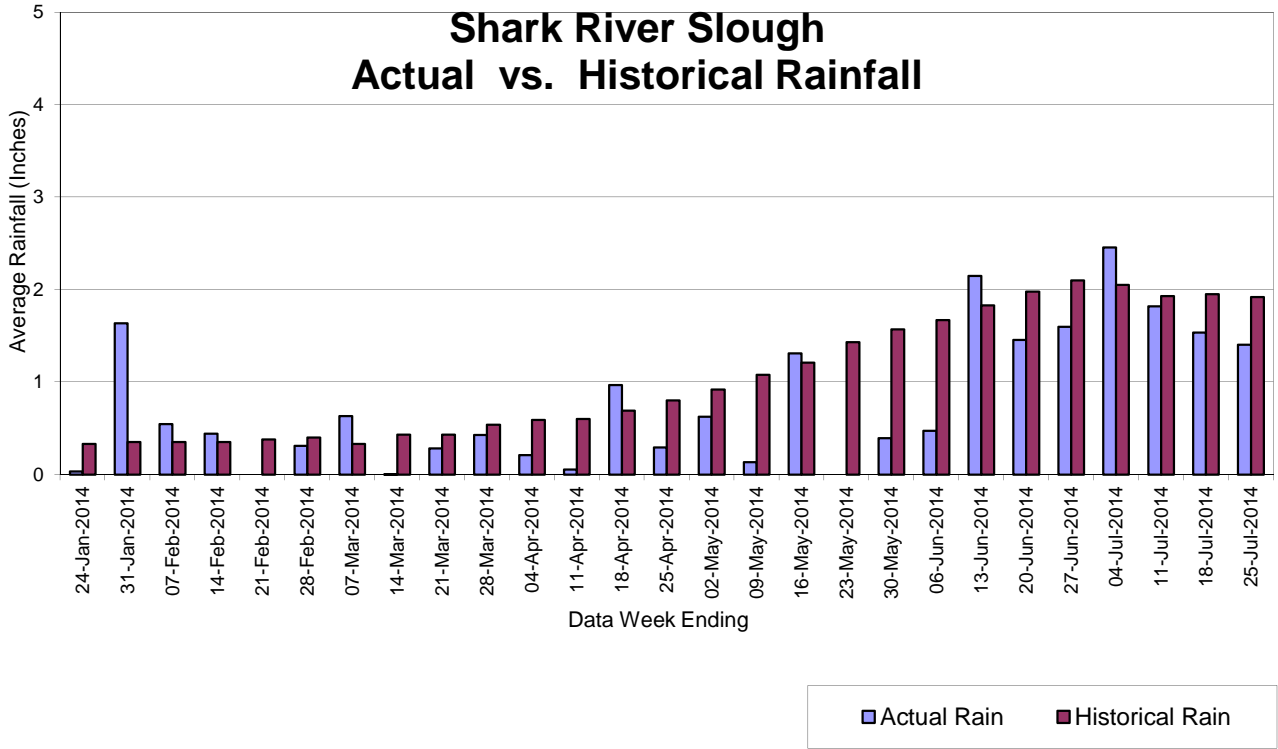
Rainfall Excess Terms

RL1 -0.76	RL2 -0.57	RL3 -3.40
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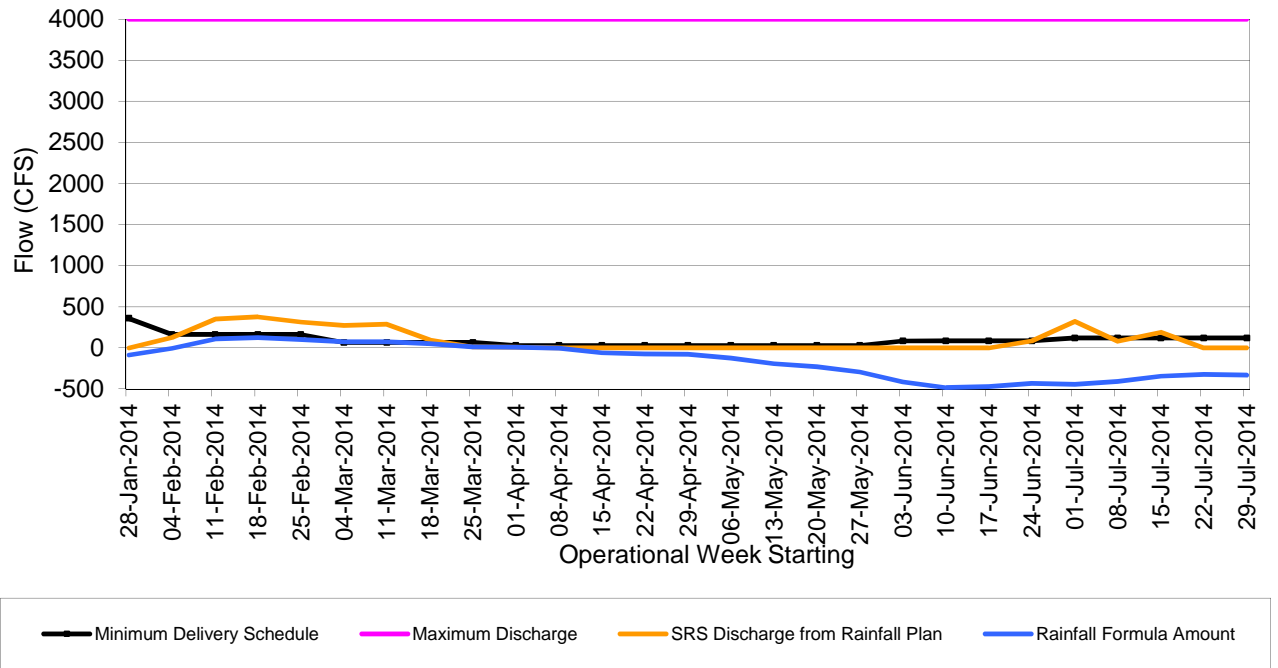
**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**

## Shark River Slough Actual vs. Historical Rainfall



## Deliveries to Shark River Slough Computed by Rainfall Plan



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow July 22, 2014 to July 28, 2014 0 cfs

S-12 Discharge 0 cfs  
 S-333 Discharge 0 cfs

----- Data Summary -----  
 July 11, 2014 to July 18, 2014  
 WCA-3A Stage (end of week) 9.30 ft. msl  
 Angel's 6.31 ft. msl  
 G3273 6.64 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	1.54	1.17
S-140		1.25
ENP		M

This Week's Avg	1.54	1.21
Pre-Project Avg	1.95	1.43

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is 0 cfs  
 Distance to Top of Zone E 0.03 feet  
 Distance to Bottom of Regulatory Zone 0.51 feet

----- Statistical Parameters -----

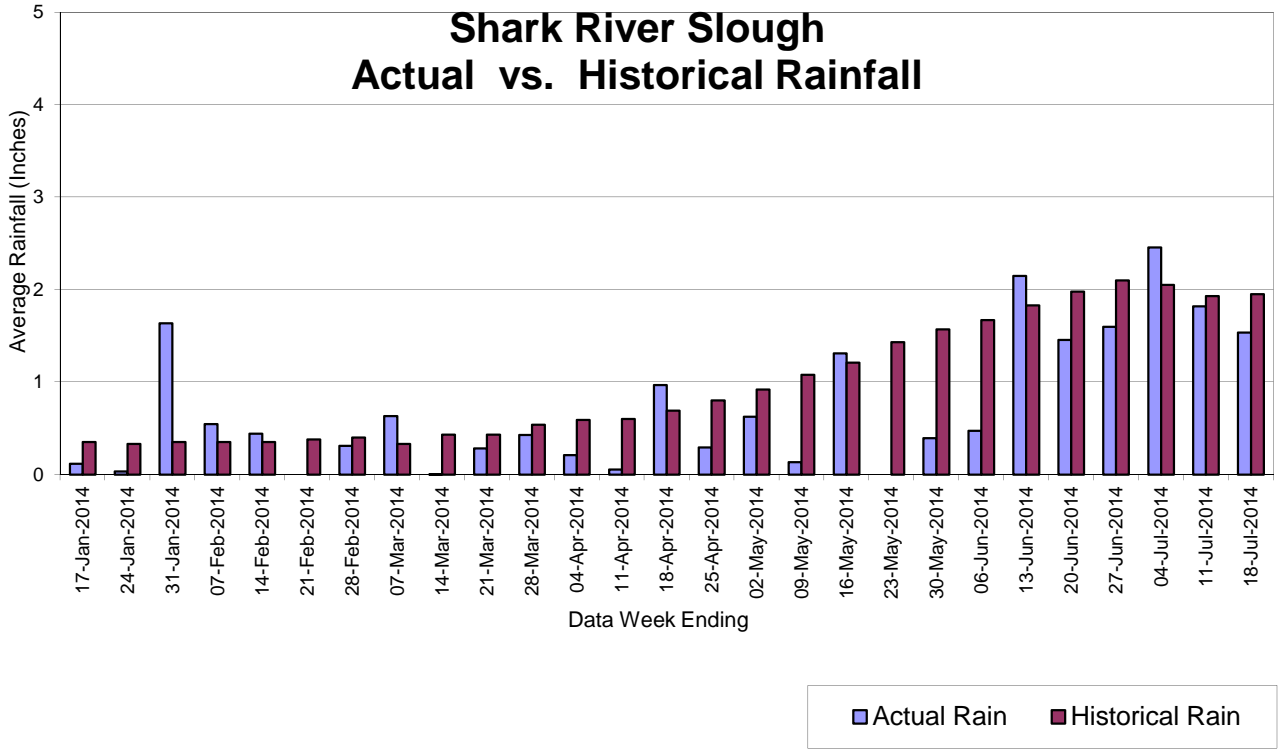
Rainfall Formula Amount -322 cfs  
 Last Week's Rainfall Formula -341 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -0.25 RL2 -0.23 RL3 -3.72

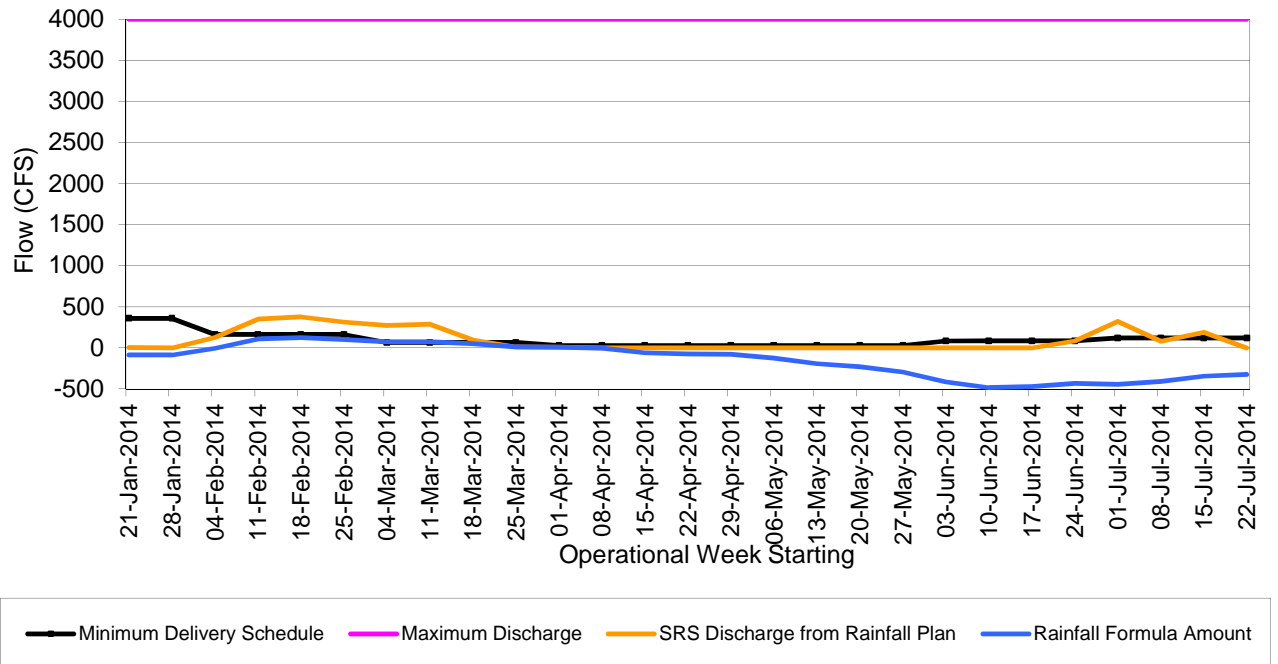
**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**

## Shark River Slough Actual vs. Historical Rainfall



## Deliveries to Shark River Slough Computed by Rainfall Plan





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow July 15, 2014 to July 21, 2014 191 cfs

S-12 Discharge 86 cfs  
 S-333 Discharge 105 cfs

----- Data Summary -----  
 WCA-3A Stage (end of week) July 4, 2014 to July 11, 2014  
 Angel's 9.32 ft. msl  
 G3273 6.74 ft. msl  
6.69 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	1.82	1.34
S-140		1.31
ENP		M

This Week's Avg	1.82	1.32
Pre-Project Avg	1.93	1.45

----- Transition Zone Information -----

**WCA-3A is in Zone D**

Supplemental discharge is 191 cfs  
 Distance to Top of Zone E -0.54 feet  
 Distance to Bottom of Regulatory Zone 0.45 feet

----- Statistical Parameters -----

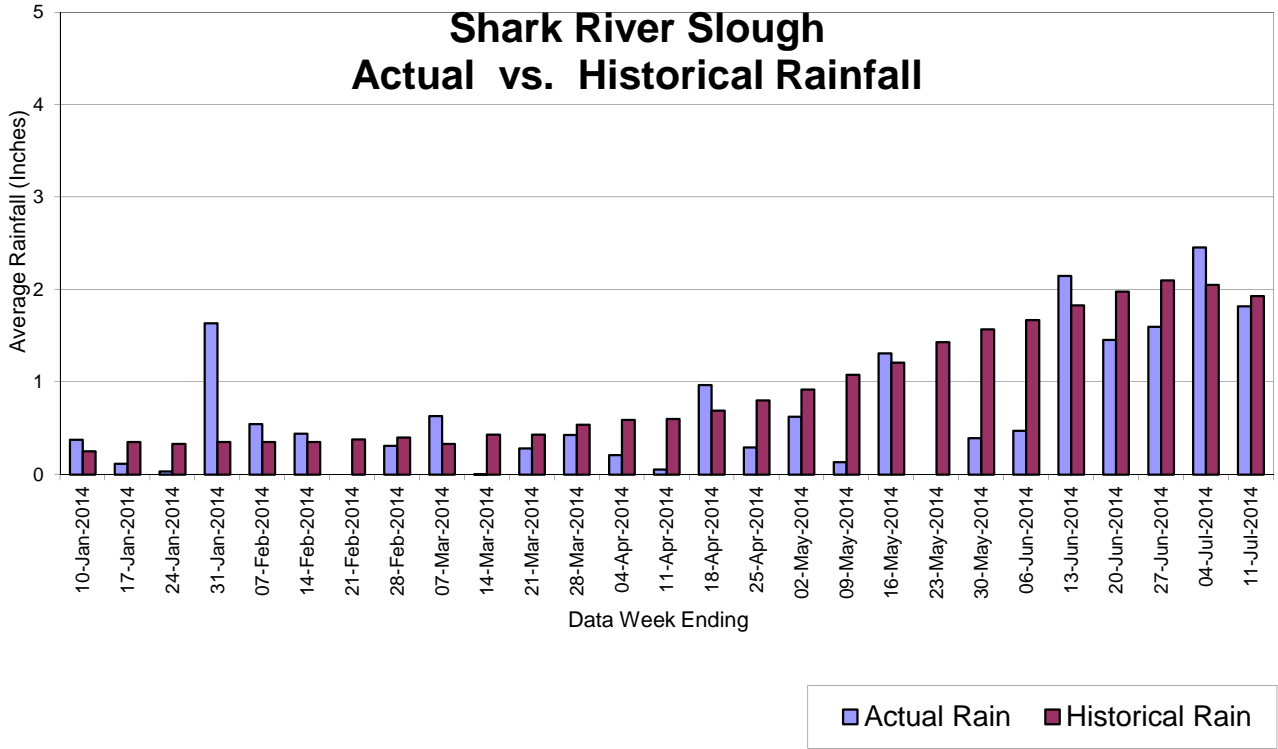
Rainfall Formula Amount -341 cfs  
 Last Week's Rainfall Formula -408 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
RL1 0.42 RL2 -1.57 RL3 -3.87

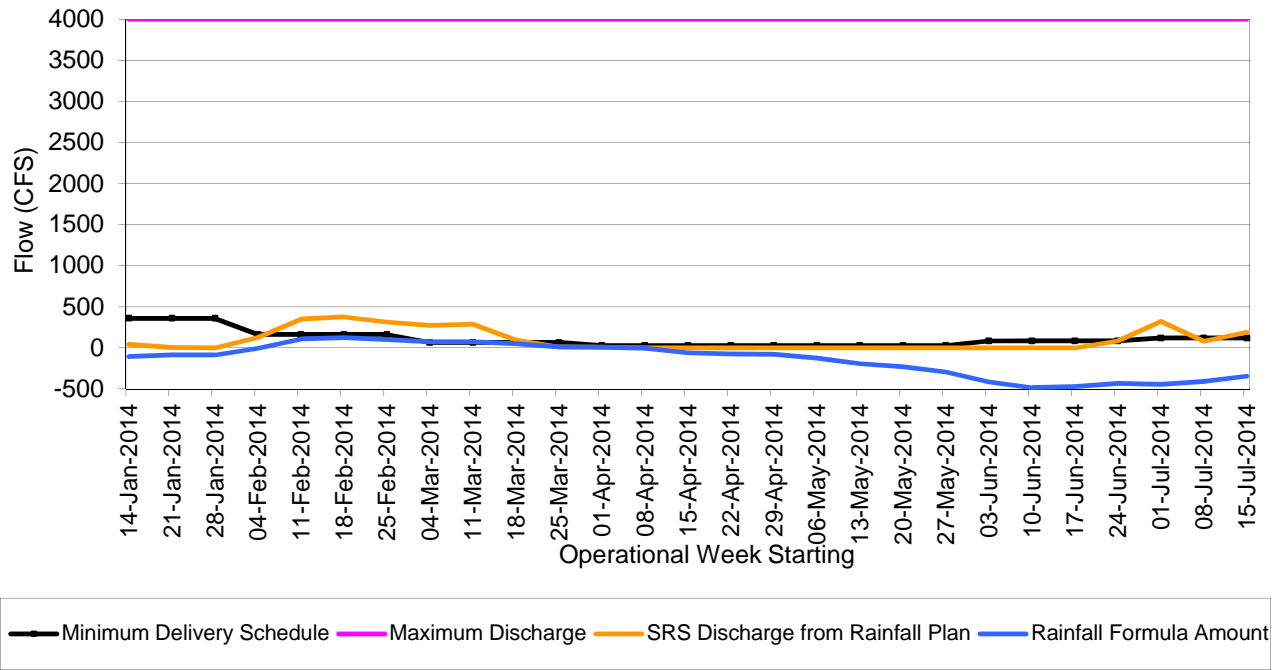
**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**

## Shark River Slough Actual vs. Historical Rainfall



## Deliveries to Shark River Slough Computed by Rainfall Plan



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow July 8, 2014 to July 14, 2014 83 cfs

S-12 Discharge 37 cfs  
 S-333 Discharge 46 cfs

----- Data Summary -----  
 WCA-3A Stage (end of week) June 27, 2014 to July 4, 2014  
 Angel's 9.28 ft. msl  
 G3273 5.87 ft. msl  
6.32 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	2.46	1.47
S-140		1.38
ENP		M

	2.46	1.43
This Week's Avg	2.05	1.45
Pre-Project Avg		

----- Transition Zone Information -----

**WCA-3A is in Zone D**

Supplemental discharge is 83 cfs  
 Distance to Top of Zone E -0.45 feet  
 Distance to Bottom of Regulatory Zone 0.44 feet

----- Statistical Parameters -----

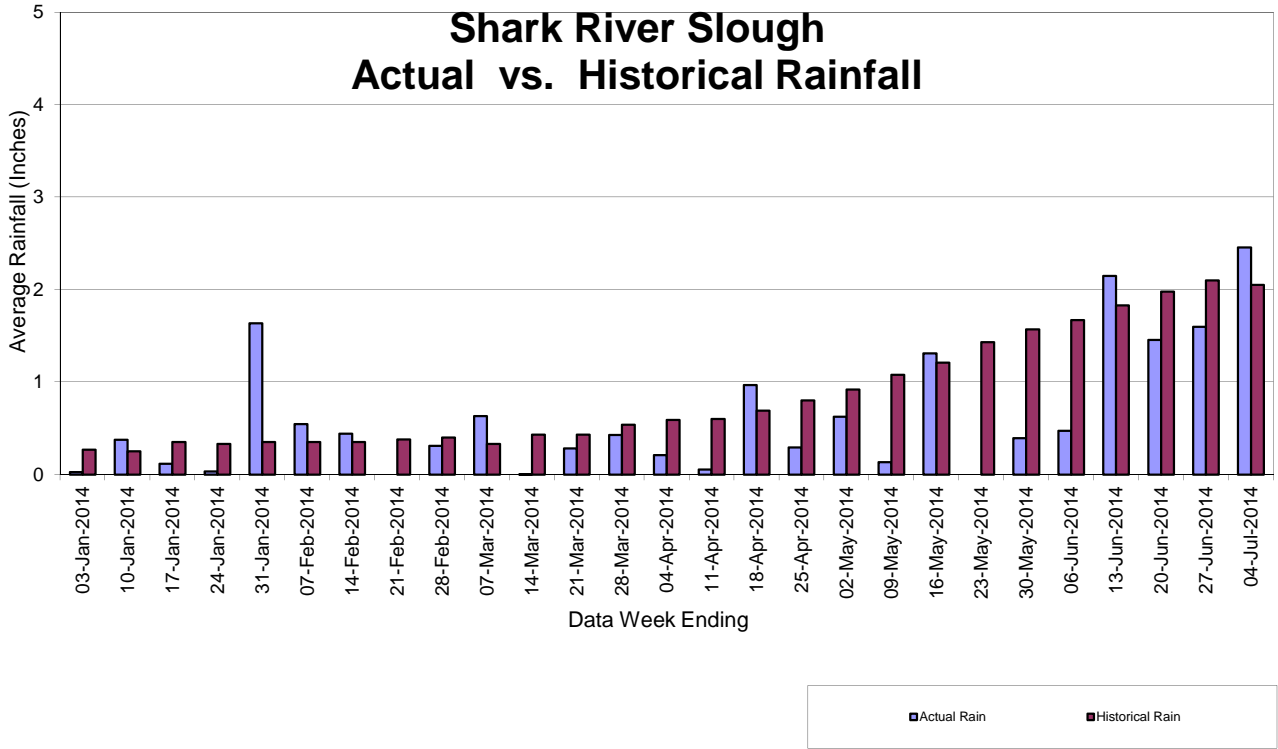
Rainfall Formula Amount -408 cfs  
 Last Week's Rainfall Formula -442 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
RL1 -0.13 RL2 -2.24 RL3 -3.12

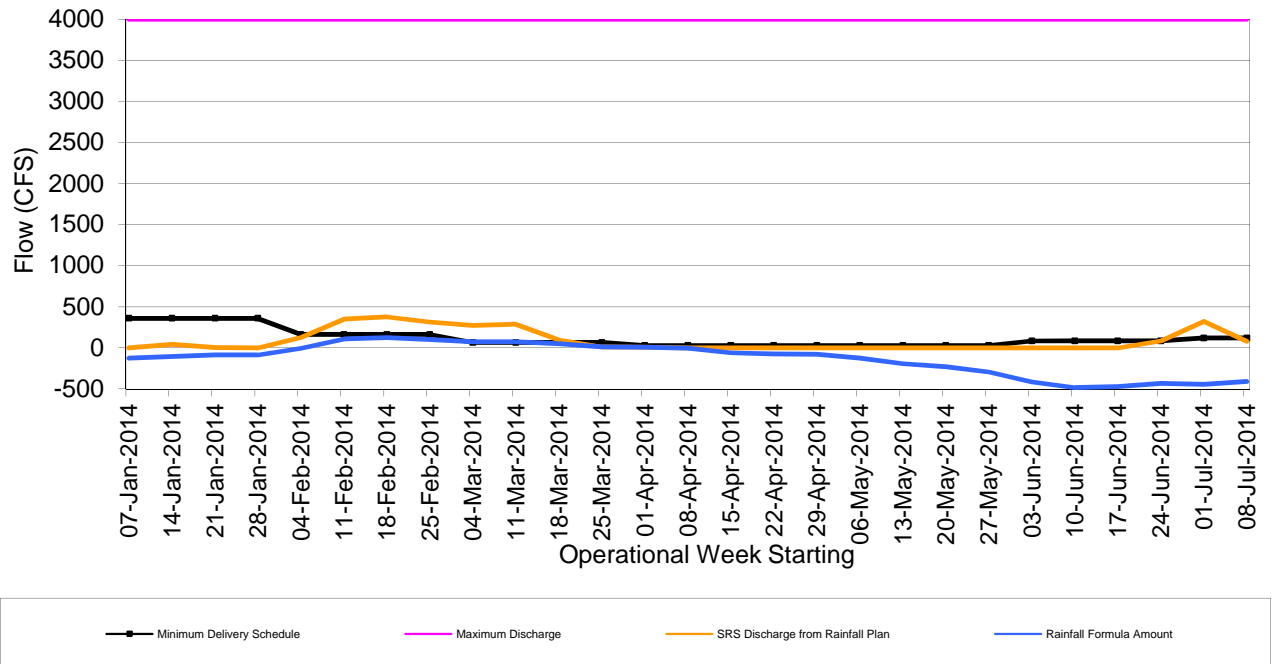
**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**

## Shark River Slough Actual vs. Historical Rainfall



## Deliveries to Shark River Slough Computed by Rainfall Plan



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow July 1, 2014 to July 7, 2014 322 cfs

S-12 Discharge 145 cfs  
 S-333 Discharge 177 cfs

----- Data Summary -----  
 June 20, 2014 to June 27, 2014  
 WCA-3A Stage (end of week) 9.00 ft. msl  
 Angell's 5.56 ft. msl  
 G3273 5.96 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	1.60	1.58
S-140		1.54
ENP		M
-----		
This Week's Avg	1.60	1.56
Pre-Project Avg	2.10	1.49

----- Transition Zone Information -----

**WCA-3A is in Zone E1**

Supplemental discharge is 322 cfs  
 Distance to Top of Zone E -0.13 feet  
 Distance to Bottom of Regulatory Zone 0.68 feet

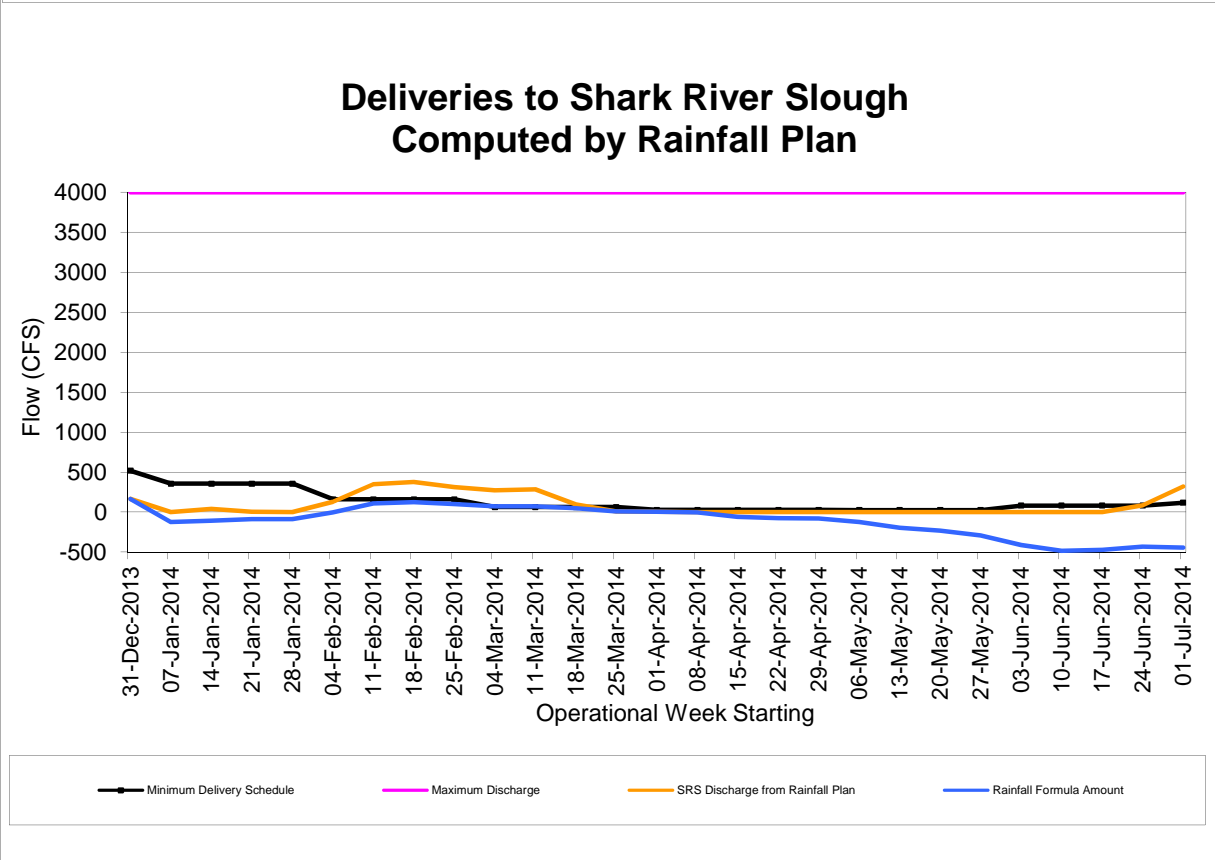
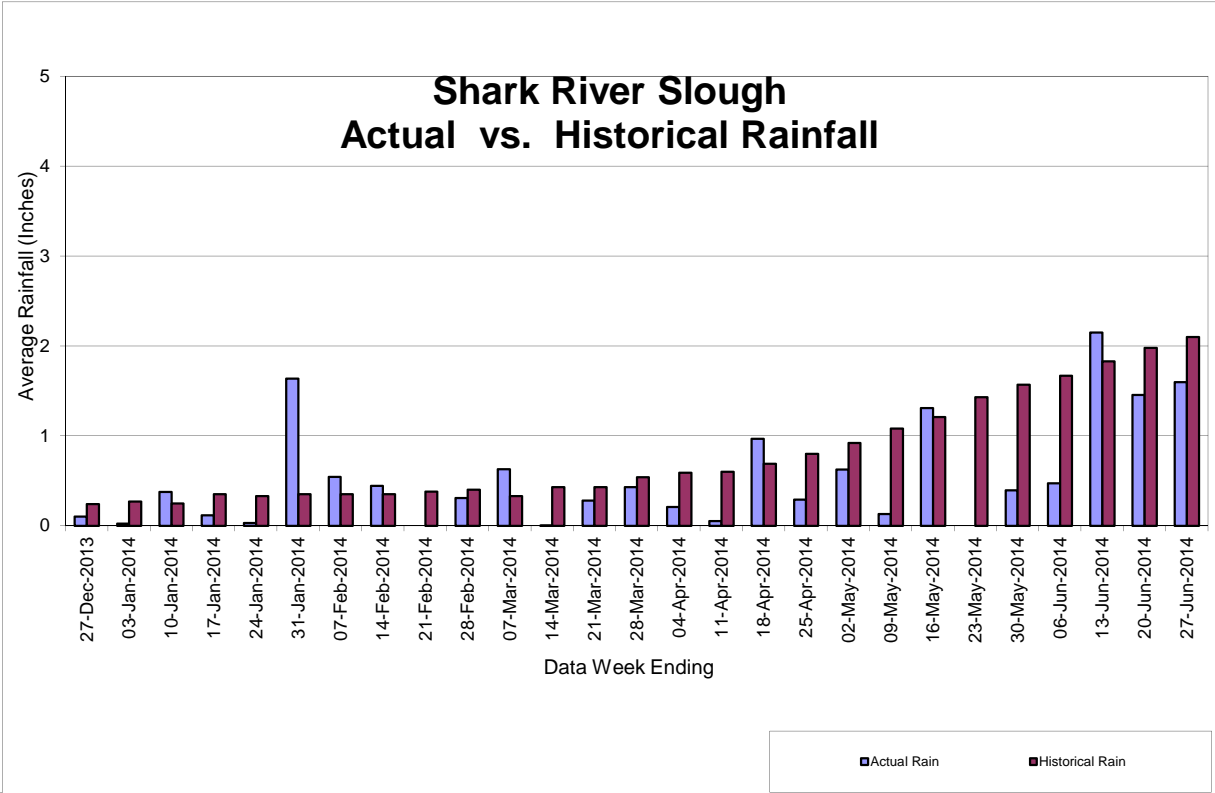
----- Statistical Parameters -----

Rainfall Formula Amount -442 cfs  
 Last Week's Rainfall Formula -431 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -0.98 RL2 -3.40 RL3 -2.06

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow June 24, 2014 to June 30, 2014 85 cfs

S-12 Discharge 38 cfs  
 S-333 Discharge 47 cfs

----- Data Summary -----  
 June 13, 2014 to June 20, 2014  
 WCA-3A Stage (end of week) 8.95 ft. msl  
 Angel's 5.75 ft. msl  
 G3273 6.11 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	1.46	1.33
S-140		1.45
ENP		M
-----		
This Week's Avg	1.46	1.39
Pre-Project Avg	1.98	1.51

----- Transition Zone Information -----

**WCA-3A is in Zone E1**

Supplemental discharge is 85 cfs  
 Distance to Top of Zone E -0.03 feet  
 Distance to Bottom of Regulatory Zone 0.68 feet

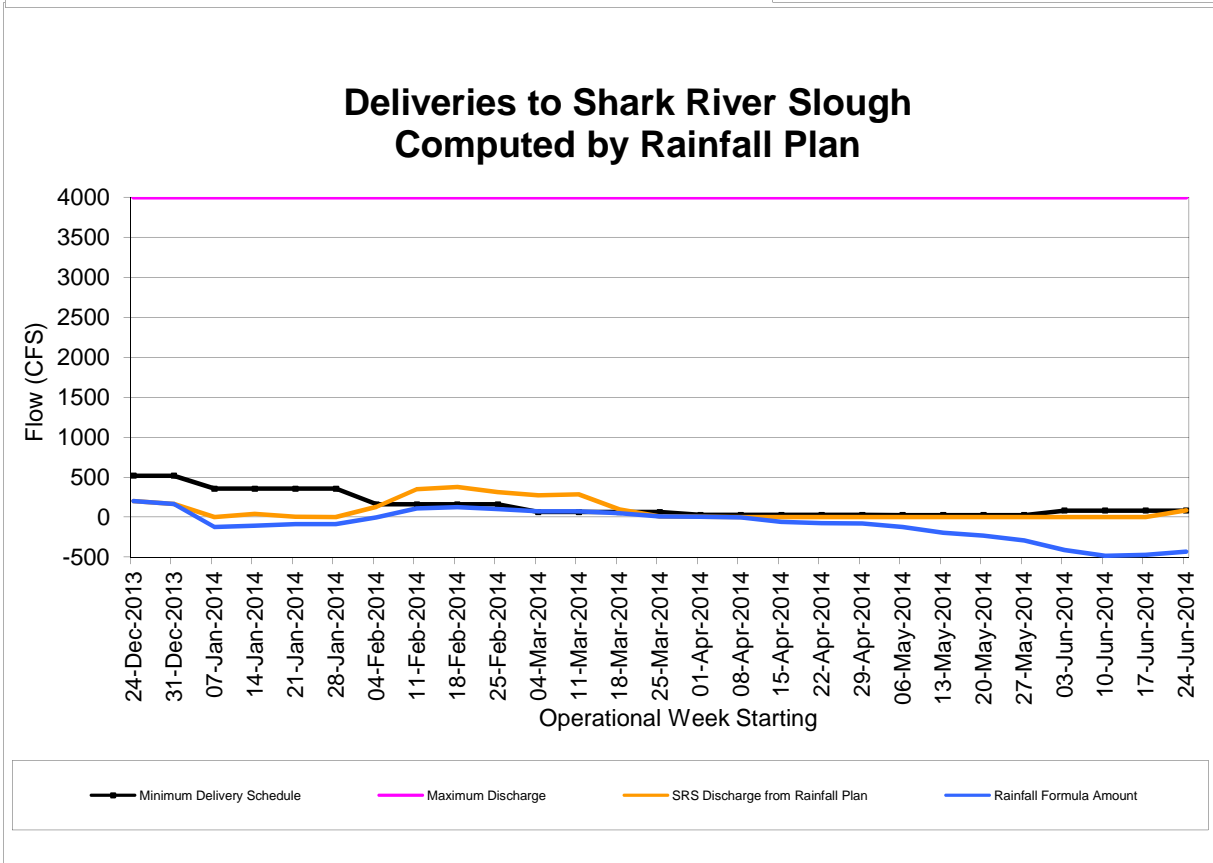
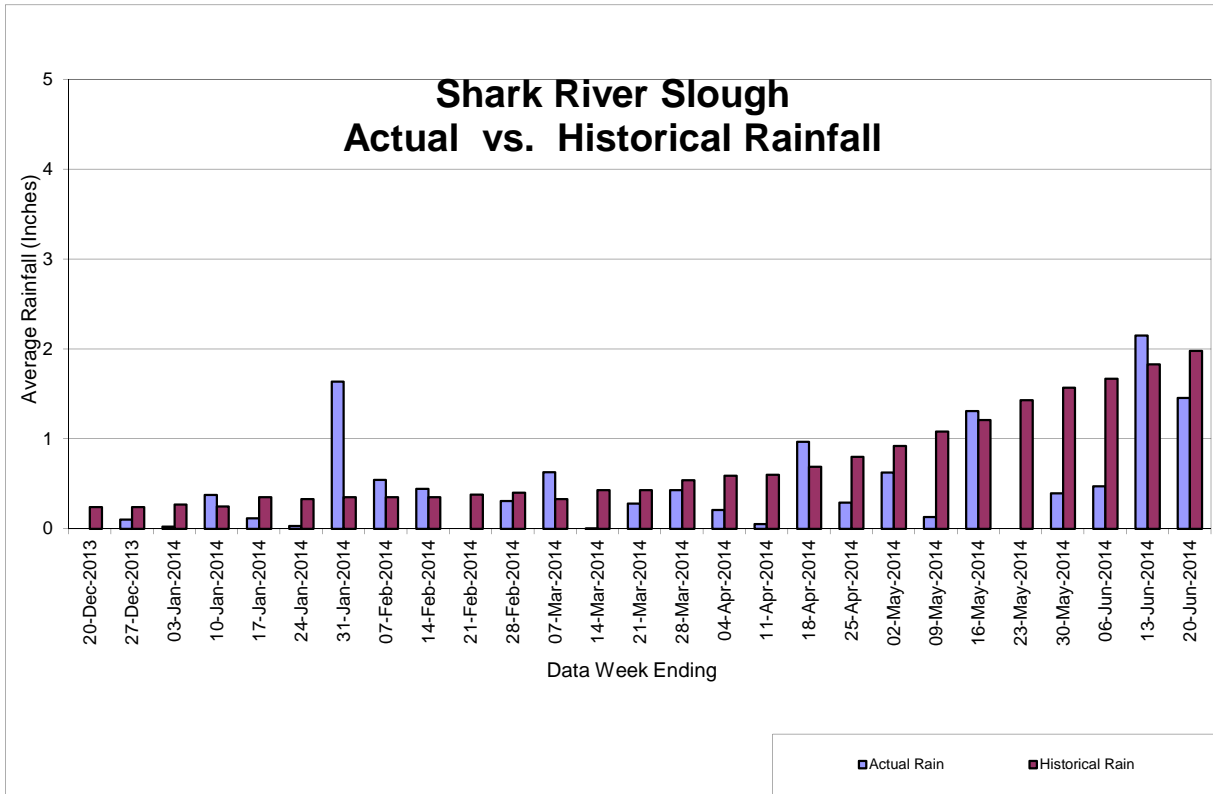
----- Statistical Parameters -----

Rainfall Formula Amount -431 cfs  
 Last Week's Rainfall Formula -469 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -0.10 RL2 -3.72 RL3 -1.74

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow **June 17, 2014** to **June 23, 2014** **0 cfs**

S-12 Discharge **0 cfs**  
 S-333 Discharge **0 cfs**

----- **Data Summary** -----  
**June 6, 2014** to **June 13, 2014**  
 WCA-3A Stage (end of week) **8.95** ft. msl  
 Angel's **5.52** ft. msl  
 G3273 **6.11** ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	<b>2.15</b>	<b>1.52</b>
S-140		<b>1.57</b>
ENP		<b>M</b>
-----		
This Week's Avg	<b>2.15</b>	<b>1.54</b>
Pre-Project Avg	<b>1.83</b>	<b>1.55</b>

----- **Transition Zone Information** -----

**WCA-3A is in Zone E**

Supplemental discharge is **0 cfs**  
 Distance to Top of Zone E **0.01 feet**  
 Distance to Bottom of Regulatory Zone **0.63 feet**

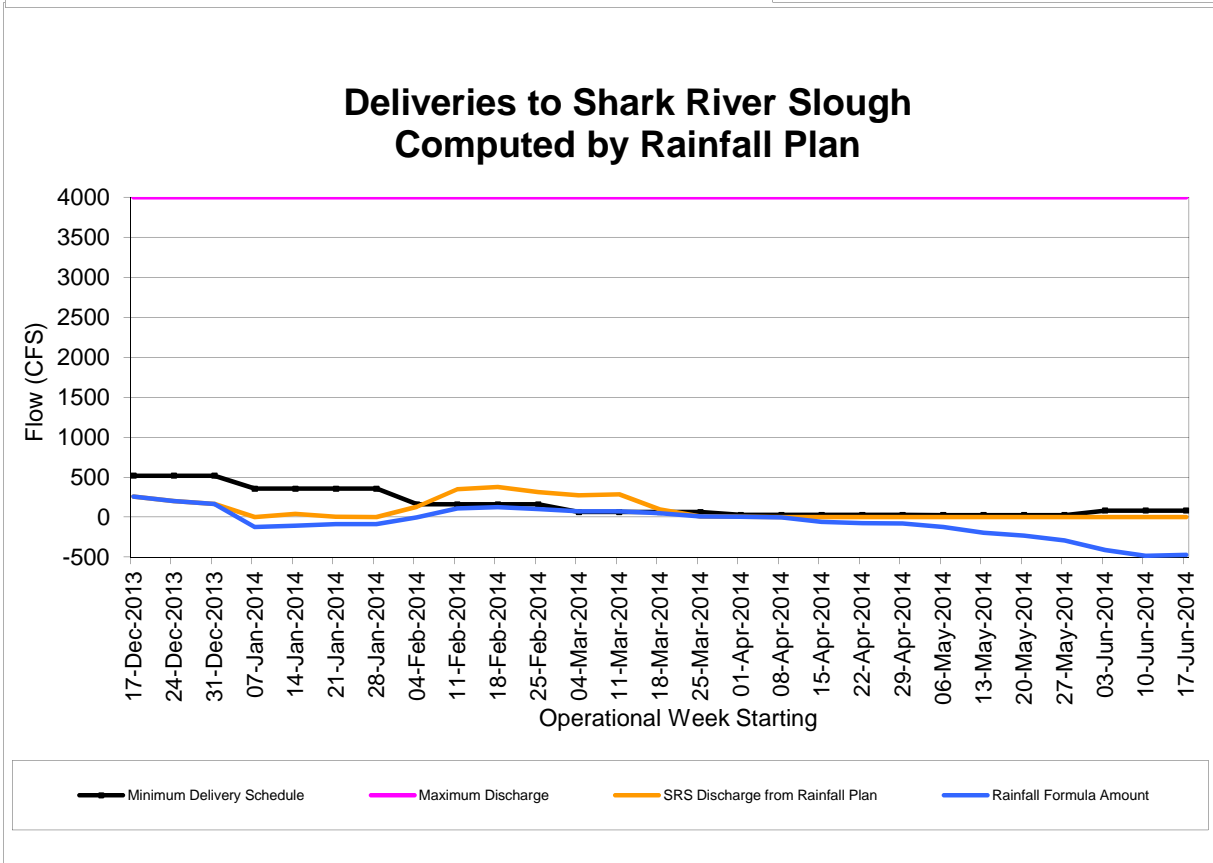
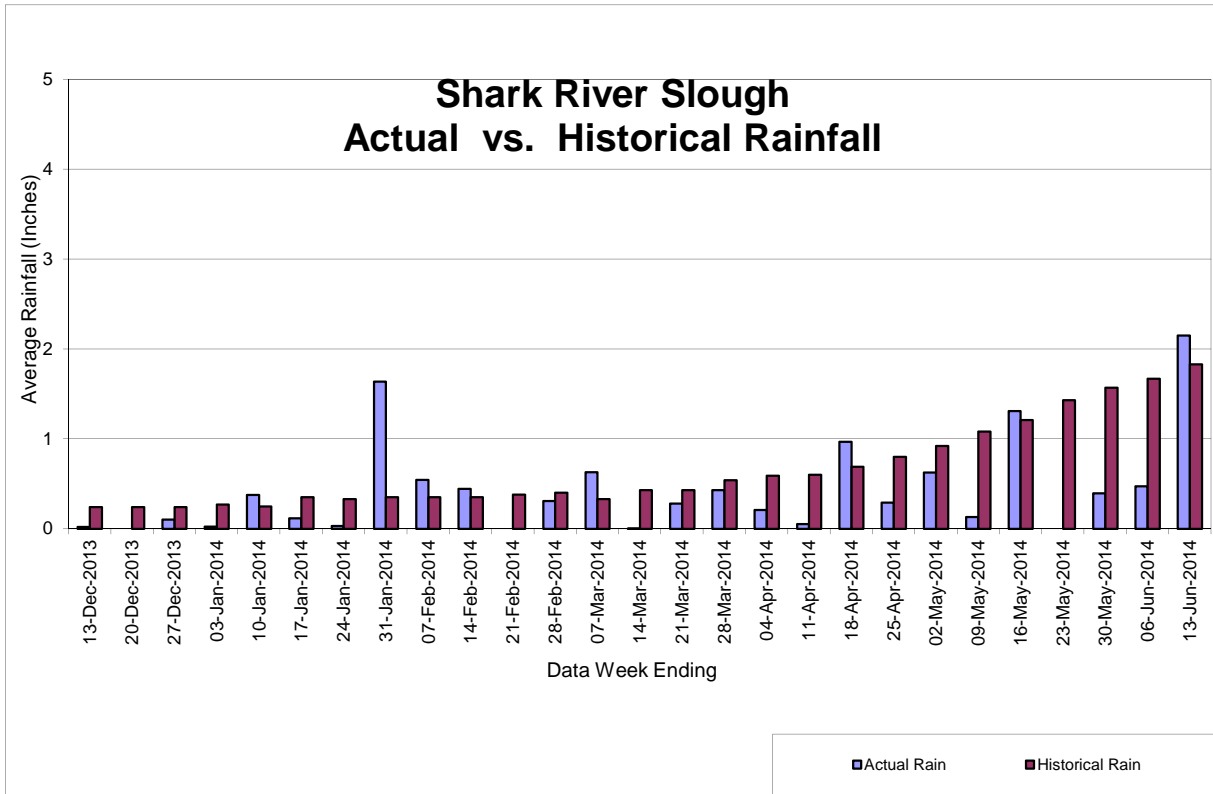
----- **Statistical Parameters** -----

Rainfall Formula Amount **-469 cfs**  
 Last Week's Rainfall Formula **-484 cfs**  
 Pre-Project Mean Discharge **0 cfs**

Rainfall Excess Terms  
RL1 **-0.58** RL2 **-3.87** RL3 **-1.43**

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow June 10, 2014 to June 16, 2014 0 cfs

S-12 Discharge 0 cfs  
 S-333 Discharge 0 cfs

----- Data Summary -----  
 May 30, 2014 to June 6, 2014  
 WCA-3A Stage (end of week) 8.63 ft. msl  
 Angel's 4.27 ft. msl  
 G3273 4.66 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.47	1.28
S-140		1.17
ENP		M
-----		
This Week's Avg	0.47	1.22
Pre-Project Avg	1.67	1.59

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is 0 cfs  
 Distance to Top of Zone E 0.38 feet  
 Distance to Bottom of Regulatory Zone 0.91 feet

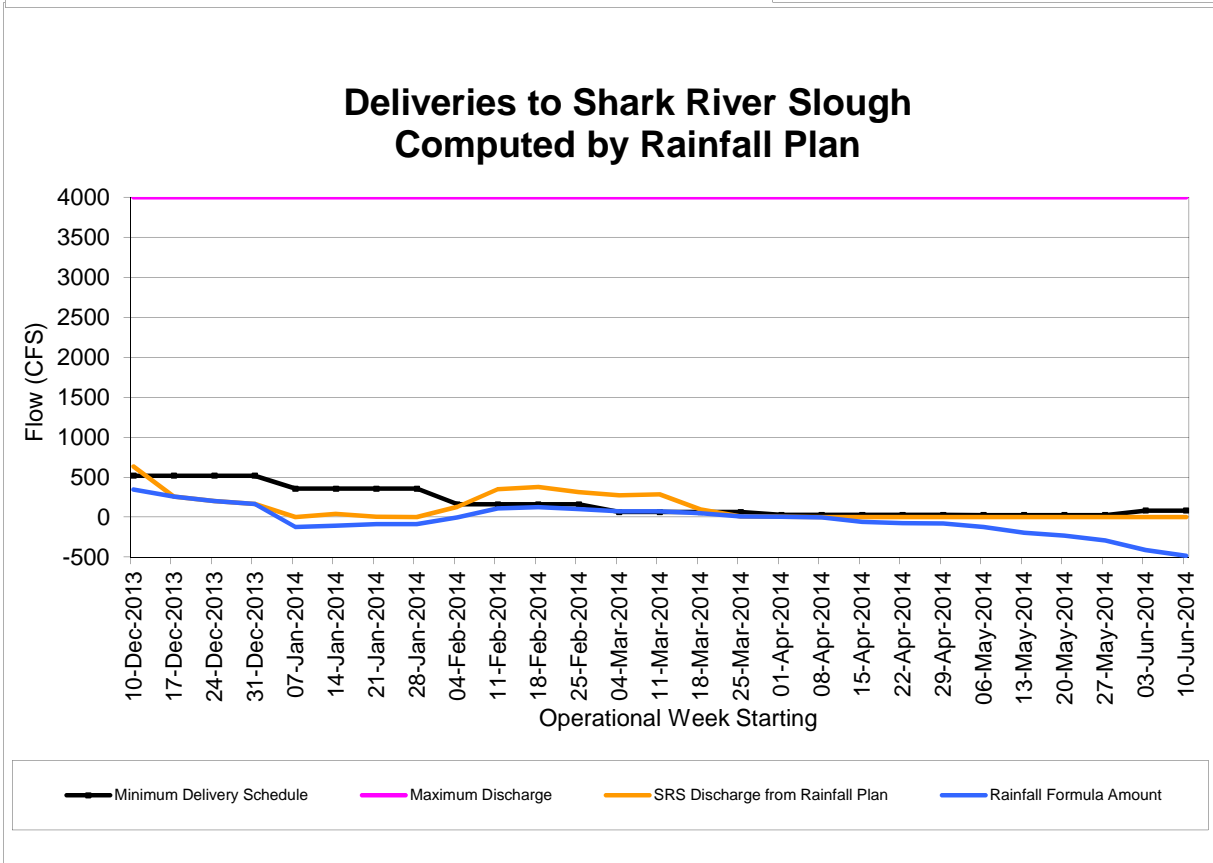
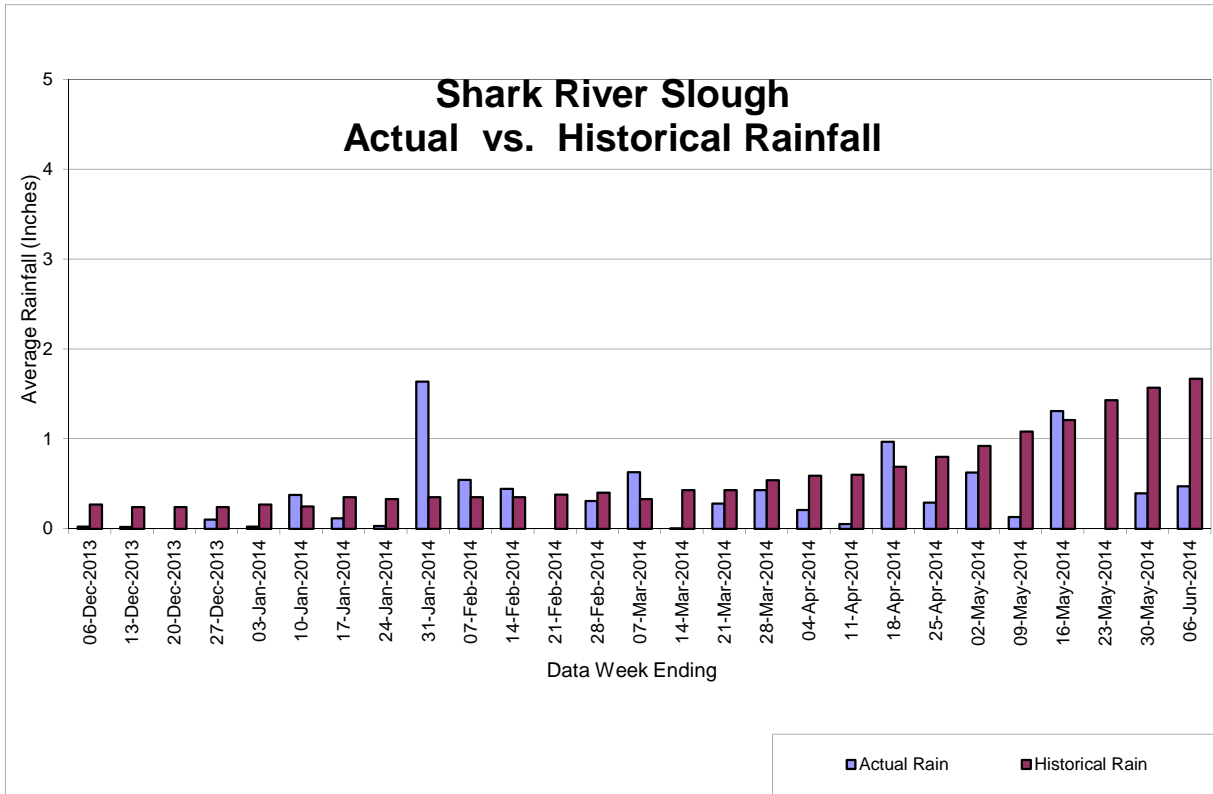
----- Statistical Parameters -----

Rainfall Formula Amount -484 cfs  
 Last Week's Rainfall Formula -411 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -2.14 RL2 -3.12 RL3 -1.28

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow June 3, 2014 to June 9, 2014 0 cfs

S-12 Discharge 0 cfs  
 S-333 Discharge 0 cfs

----- Data Summary -----  
 May 23, 2014 to May 30, 2014  
 WCA-3A Stage (end of week) 8.62 ft. msl  
 Angel's 4.01 ft. msl  
 G3273 4.45 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.39	1.72
S-140		1.64
ENP		M
-----		
This Week's Avg	0.39	1.68
Pre-Project Avg	1.57	1.61

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is 0 cfs  
 Distance to Top of Zone E 0.43 feet  
 Distance to Bottom of Regulatory Zone 0.88 feet

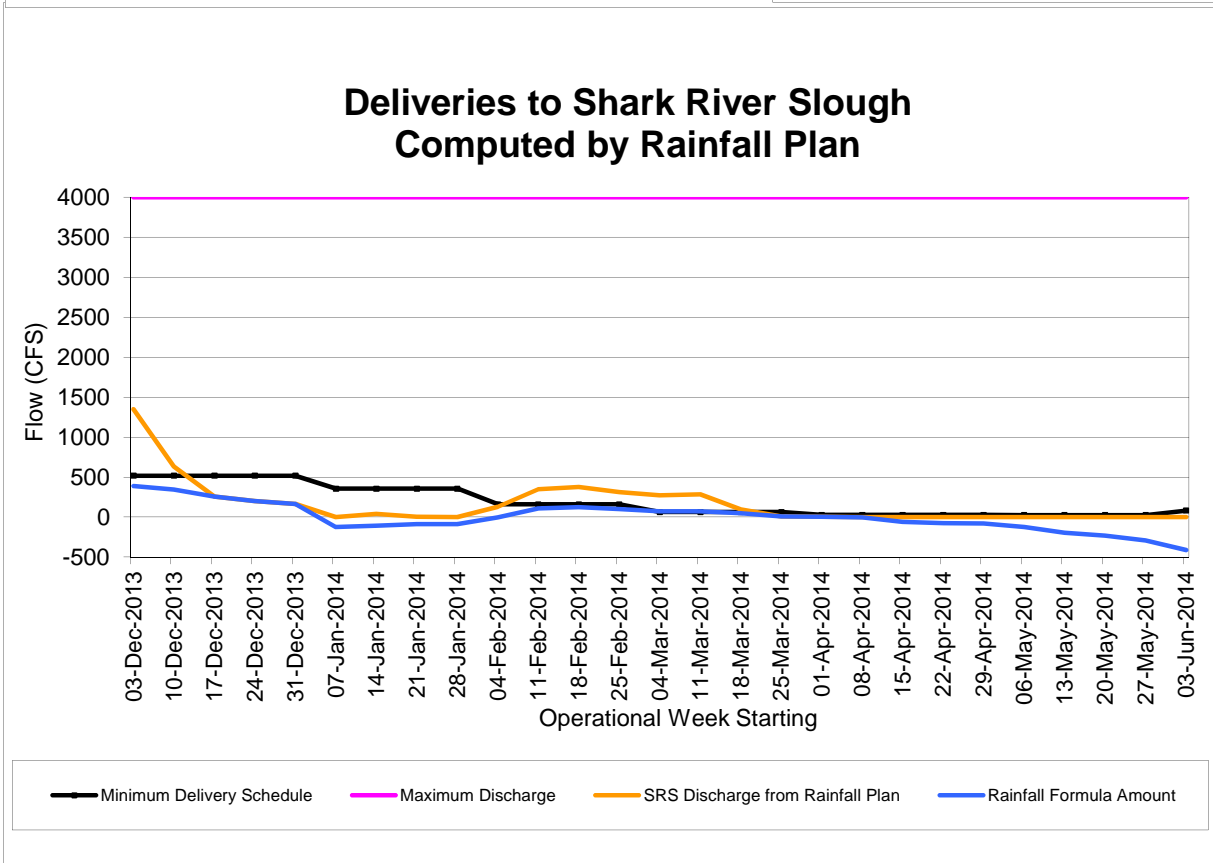
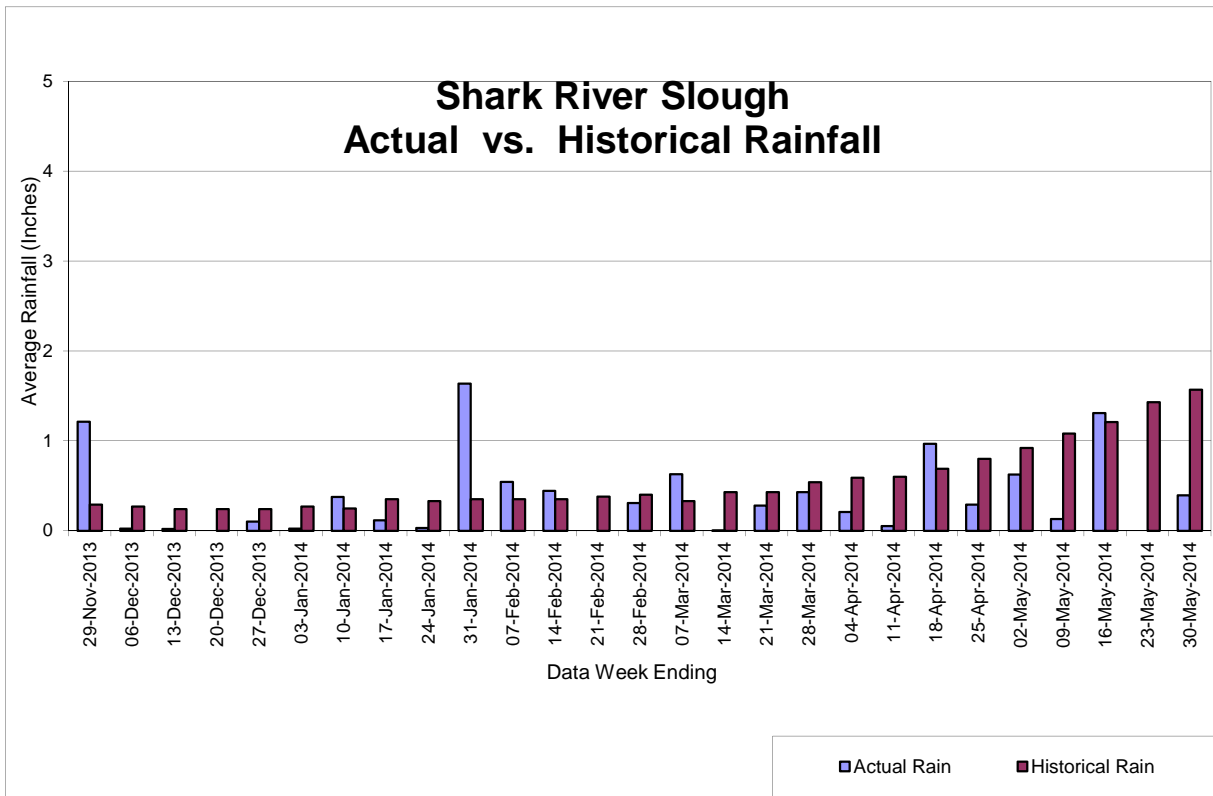
----- Statistical Parameters -----

Rainfall Formula Amount -411 cfs  
 Last Week's Rainfall Formula -291 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -2.81 RL2 -2.06 RL3 -0.80

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow **May 27, 2014** to **June 2, 2014** **0 cfs**

S-12 Discharge **0 cfs**  
 S-333 Discharge **0 cfs**

----- **Data Summary** ----- **May 16, 2014** to **May 23, 2014**

WCA-3A Stage (end of week)	<b>8.70</b>	ft. msl
Angell's	<b>4.01</b>	ft. msl
G3273	<b>4.46</b>	ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	<b>0.00</b>	<b>1.76</b>
S-140		<b>1.84</b>
ENP		<b>M</b>
This Week's Avg		
	<b>0.00</b>	<b>1.80</b>
Pre-Project Avg		
	<b>1.43</b>	<b>1.61</b>

----- **Transition Zone Information** -----

**WCA-3A is in Zone E**

Supplemental discharge is	<b>0 cfs</b>
Distance to Top of Zone E	<b>0.39 feet</b>
Distance to Bottom of Regulatory Zone	<b>0.84 feet</b>

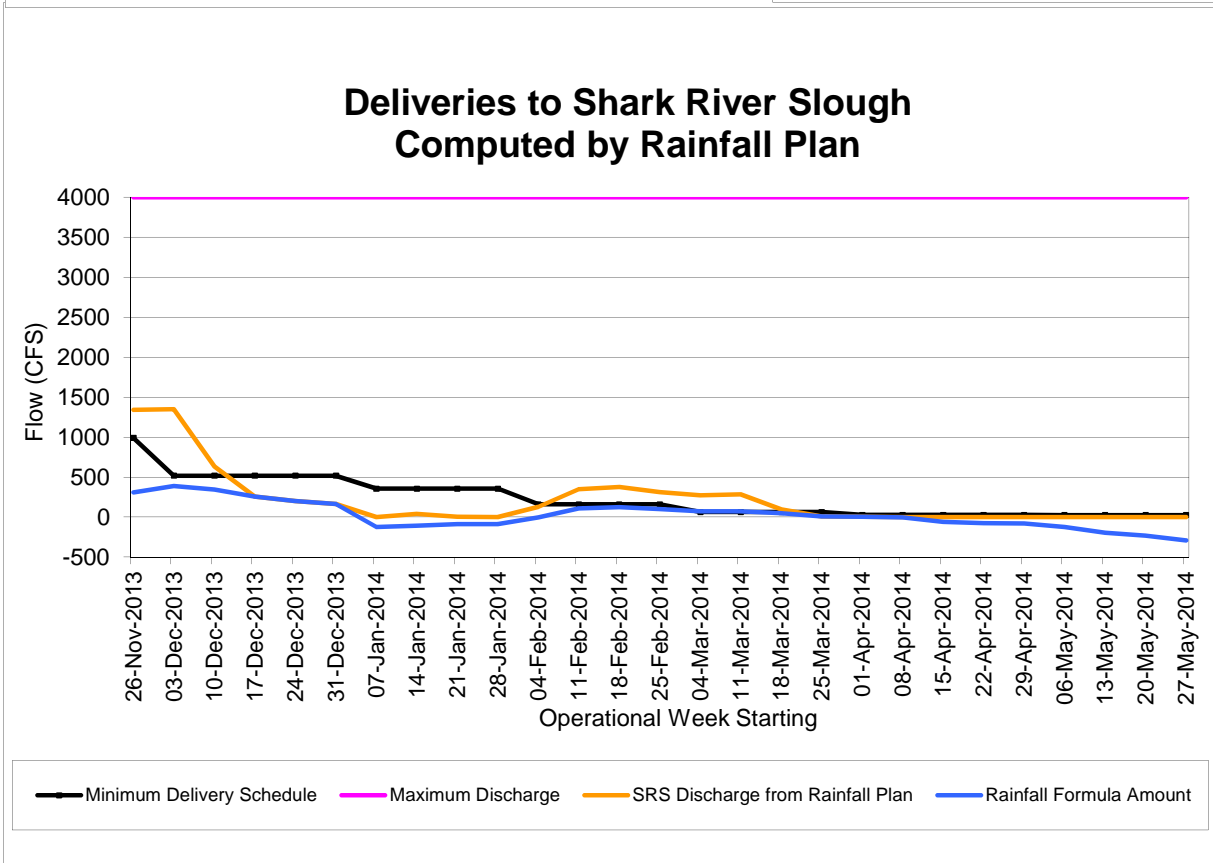
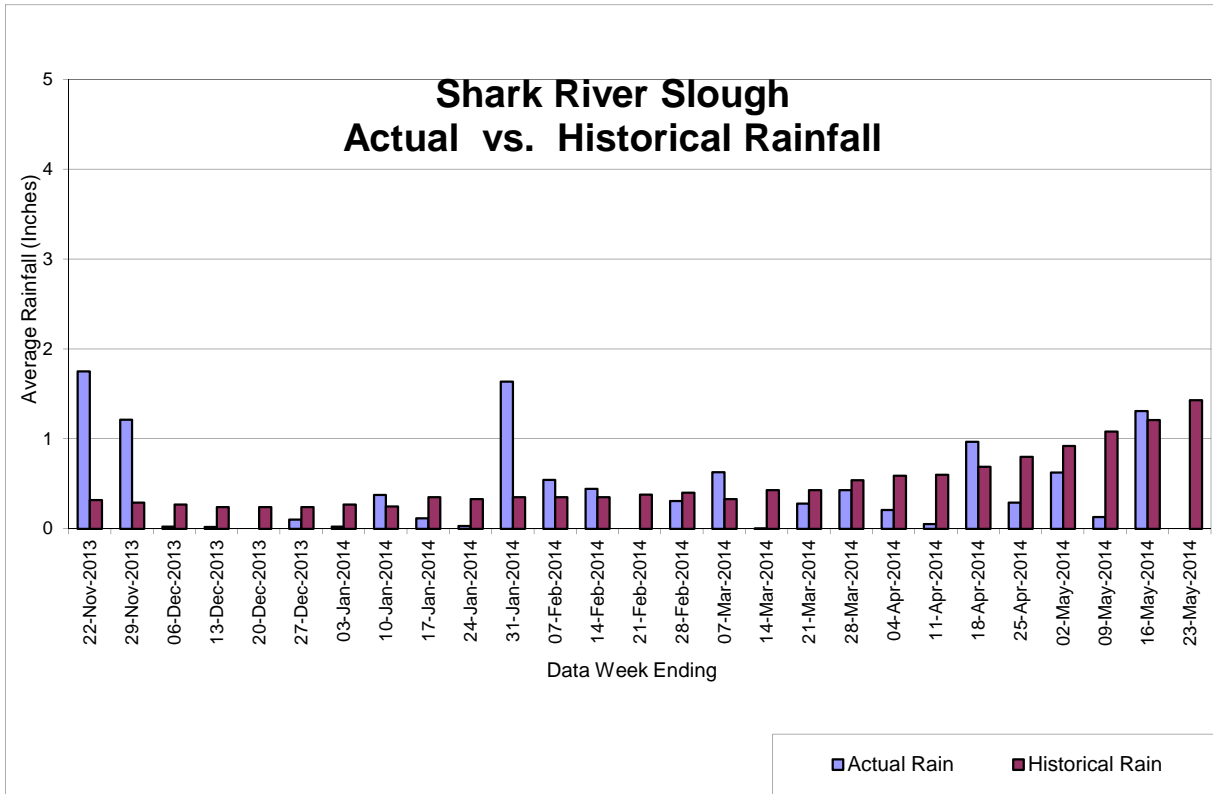
----- **Statistical Parameters** -----

Rainfall Formula Amount	<b>-291 cfs</b>
Last Week's Rainfall Formula	<b>-229 cfs</b>
Pre-Project Mean Discharge	<b>0 cfs</b>

Rainfall Excess Terms	RL1 <b>-1.58</b>	RL2 <b>-1.74</b>	RL3 <b>-1.35</b>
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**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow **May 20, 2014** to **May 26, 2014** **0 cfs**

S-12 Discharge **0 cfs**  
 S-333 Discharge **0 cfs**

----- **Data Summary** -----  
**May 9, 2014** to **May 16, 2014**  
 WCA-3A Stage (end of week) **8.87** ft. msl  
 Angel's **4.03** ft. msl  
 G3273 **5.18** ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	<b>1.31</b>	<b>1.77</b>
S-140		<b>1.72</b>
ENP		<b>M</b>
-----		
This Week's Avg	<b>1.31</b>	<b>1.75</b>
Pre-Project Avg	<b>1.21</b>	<b>1.62</b>

----- **Transition Zone Information** -----

**WCA-3A is in Zone E**

Supplemental discharge is **0 cfs**  
 Distance to Top of Zone E **0.27 feet**  
 Distance to Bottom of Regulatory Zone **0.72 feet**

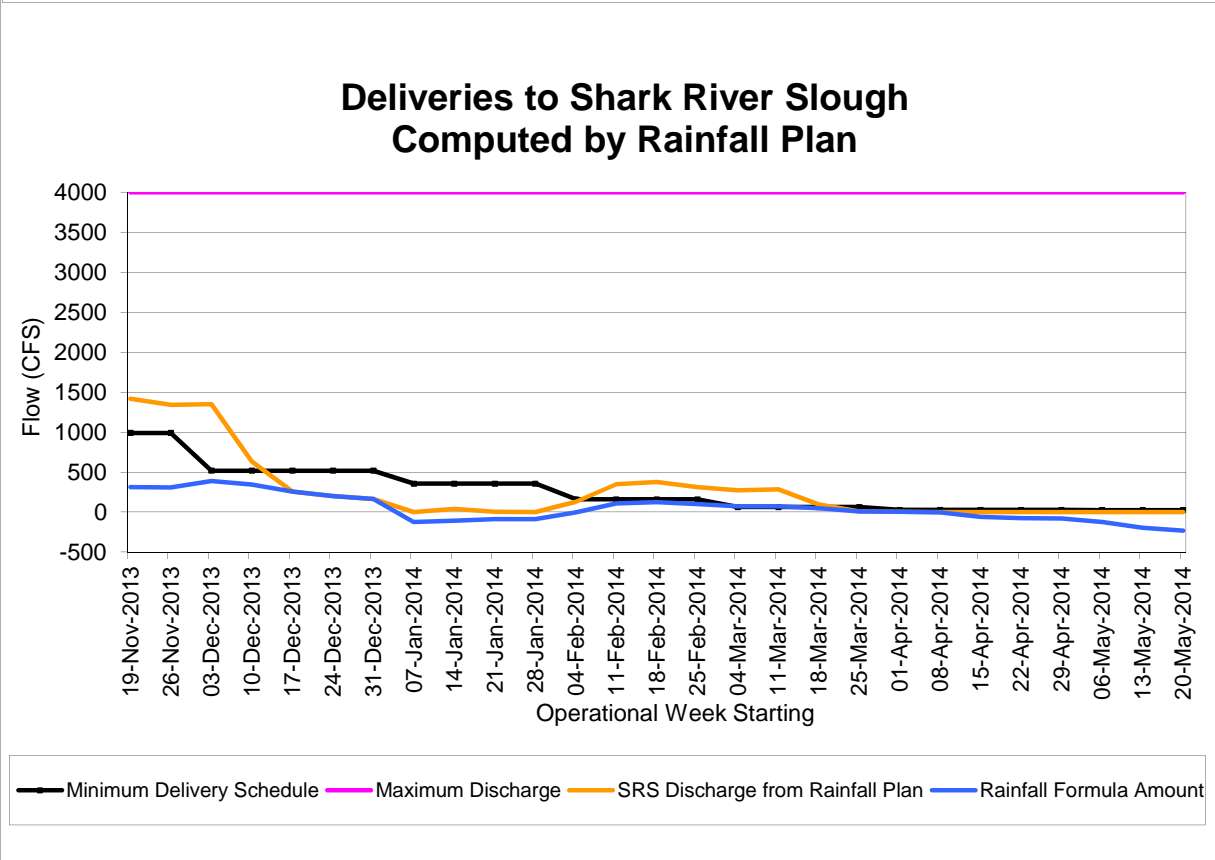
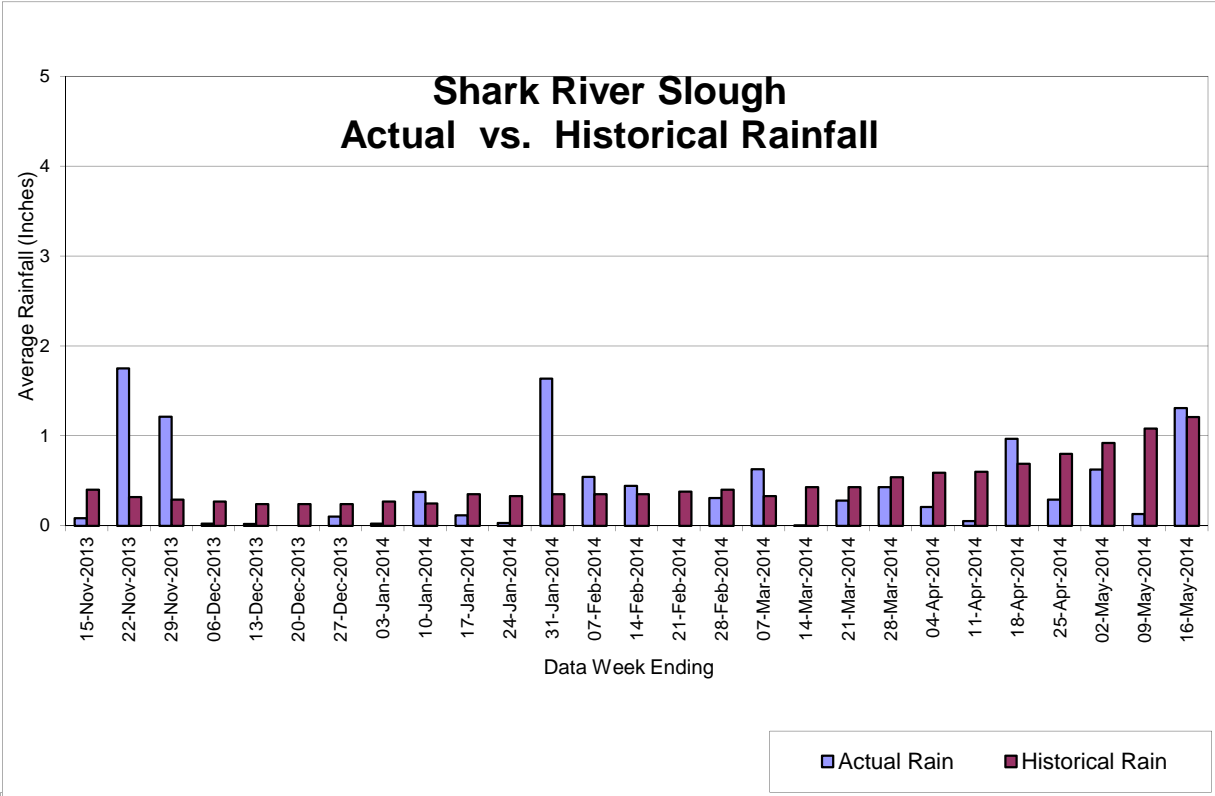
----- **Statistical Parameters** -----

Rainfall Formula Amount **-229 cfs**  
 Last Week's Rainfall Formula **-192 cfs**  
 Pre-Project Mean Discharge **0 cfs**

Rainfall Excess Terms  
RL1 **-1.05** RL2 **-1.43** RL3 **-1.26**

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow **May 13, 2014** to **May 19, 2014** **0 cfs**

S-12 Discharge **0 cfs**  
 S-333 Discharge **0 cfs**

----- **Data Summary** -----  
**May 2, 2014** to **May 9, 2014**  
 WCA-3A Stage (end of week) **8.82** ft. msl  
 Angel's **3.93** ft. msl  
 G3273 **4.42** ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	<b>0.13</b>	<b>1.68</b>
S-140		<b>1.80</b>
ENP		<b>M</b>
-----		
This Week's Avg	<b>0.13</b>	<b>1.74</b>
Pre-Project Avg	<b>1.08</b>	<b>1.61</b>

----- **Transition Zone Information** -----

**WCA-3A is in Zone E**

Supplemental discharge is **0 cfs**  
 Distance to Top of Zone E **0.36 feet**  
 Distance to Bottom of Regulatory Zone **0.82 feet**

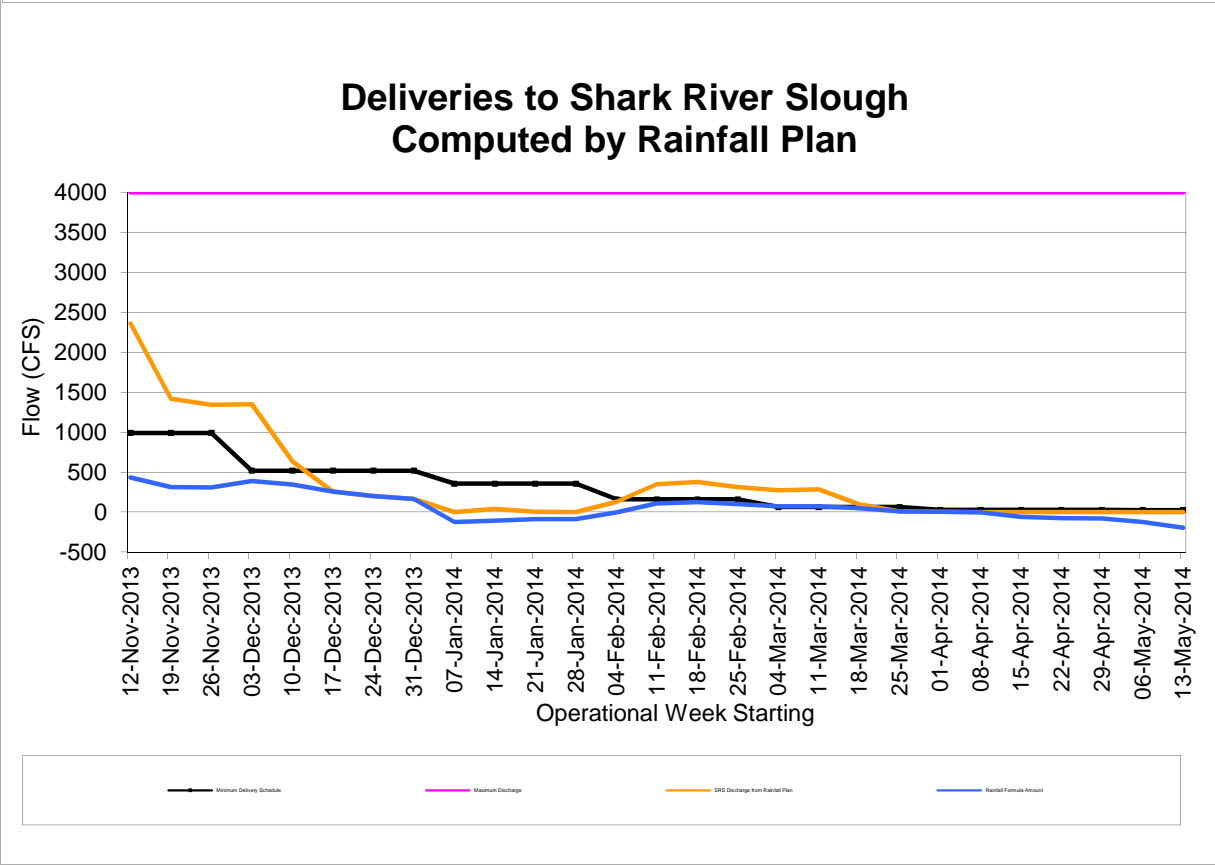
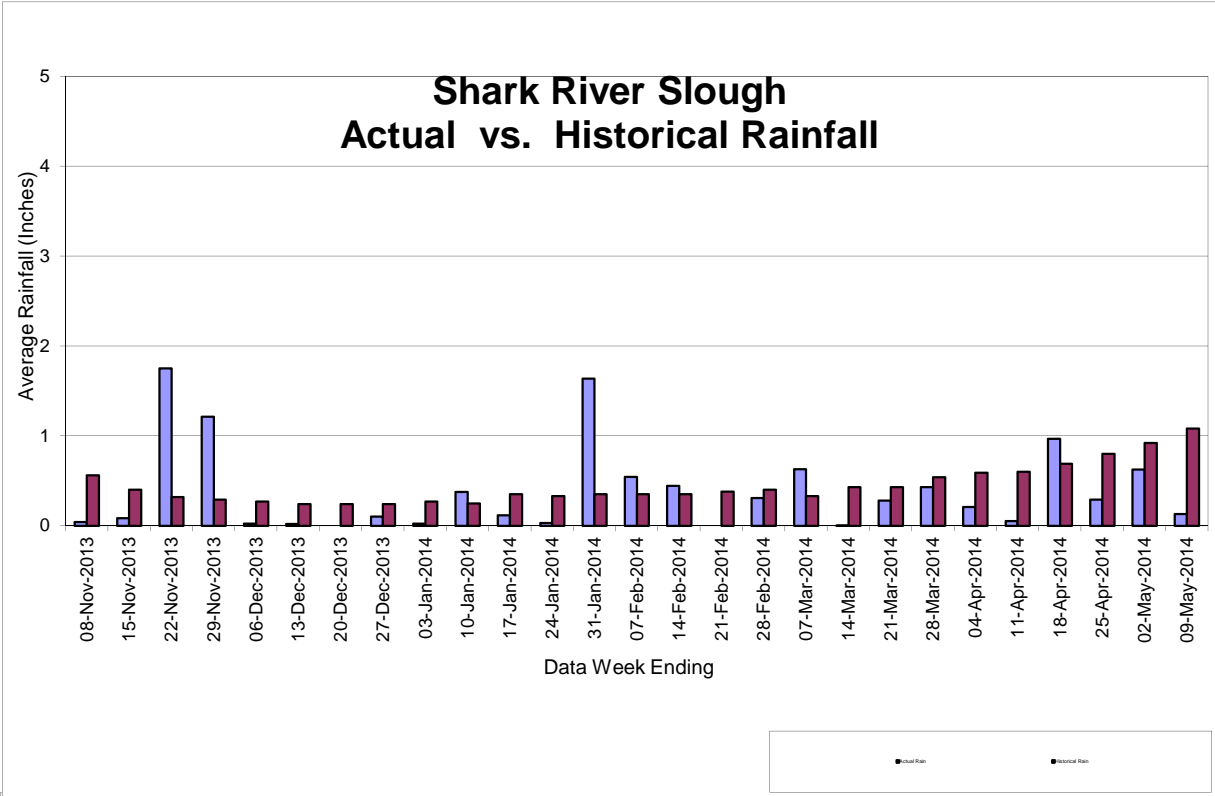
----- **Statistical Parameters** -----

Rainfall Formula Amount **-192 cfs**  
 Last Week's Rainfall Formula **-123 cfs**  
 Pre-Project Mean Discharge **0 cfs**

Rainfall Excess Terms  
RL1 **-1.54** RL2 **-1.28** RL3 **-0.77**

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow May 6, 2014

to May 12, 2014

0 cfs

S-12 Discharge

0 cfs

S-333 Discharge

0 cfs

----- Data Summary -----

April 25, 2014 to May 2, 2014

WCA-3A Stage (end of week)

8.97 ft. msl

Angel's

4.20 ft. msl

G3273

4.81 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.62	1.85
S-140		1.83
ENP		M
-----		
This Week's Avg	0.62	1.84
Pre-Project Avg	0.92	1.60

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is

0 cfs

Distance to Top of Zone E

0.26 feet

Distance to Bottom of Regulatory Zone

0.71 feet

----- Statistical Parameters -----

Rainfall Formula Amount

-123 cfs

Last Week's Rainfall Formula

-78 cfs

Pre-Project Mean Discharge

0 cfs

Rainfall Excess Terms

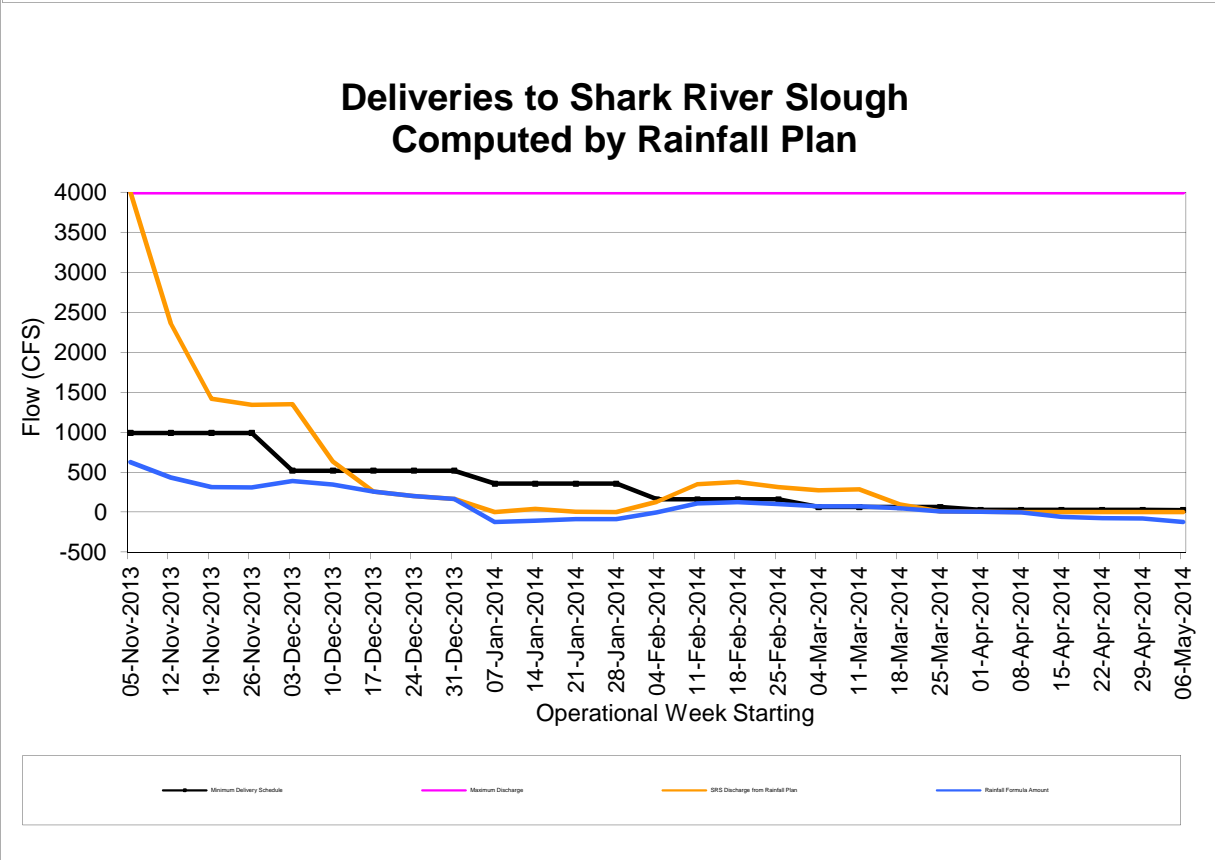
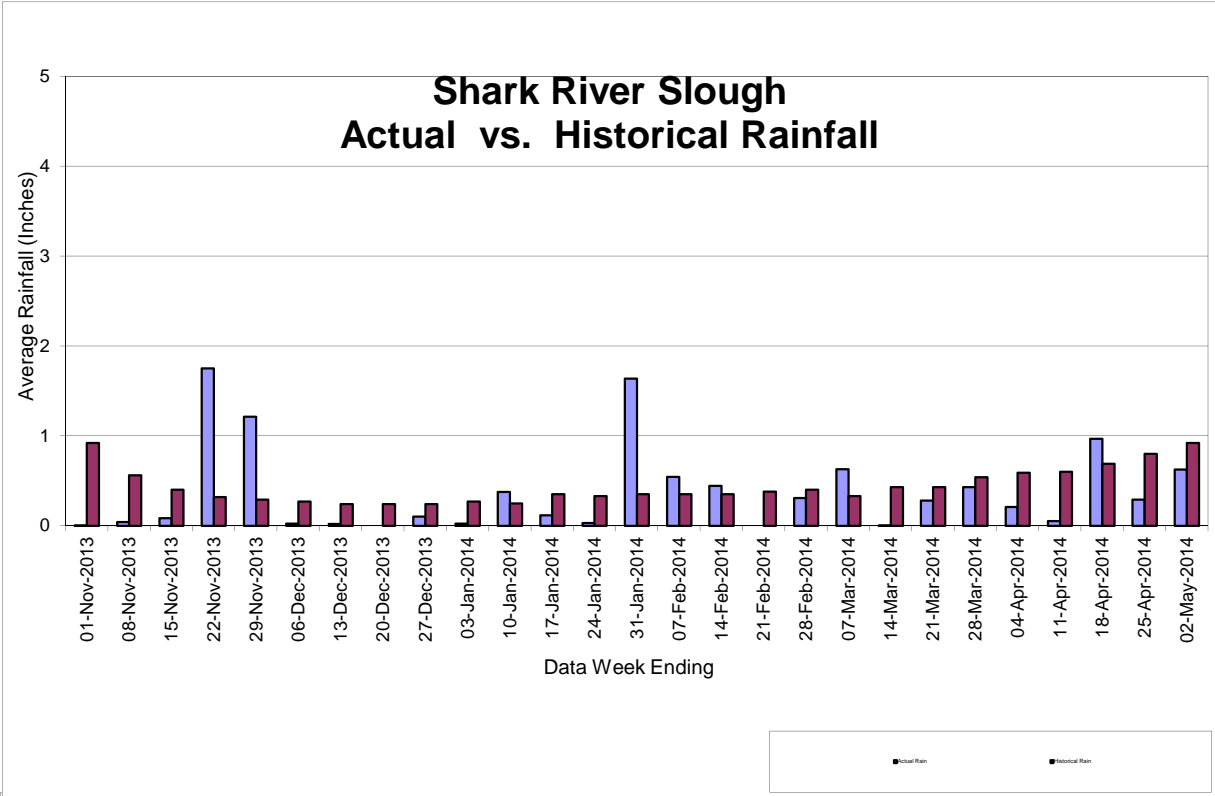
RL1 -1.00

RL2 -0.80

RL3 -0.91

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow April 29, 2014 to May 5, 2014 0 cfs

S-12 Discharge 0 cfs  
 S-333 Discharge 0 cfs

----- Data Summary -----  
 WCA-3A Stage (end of week) April 18, 2014 to April 25, 2014  
 Angel's 9.09 ft. msl  
 G3273 4.65 ft. msl  
5.29 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.29	1.58
S-140		1.60
ENP		M
This Week's Avg		
	0.29	1.59
Pre-Project Avg		
	0.80	1.58

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is 0 cfs  
 Distance to Top of Zone E 0.18 feet  
 Distance to Bottom of Regulatory Zone 0.64 feet

----- Statistical Parameters -----

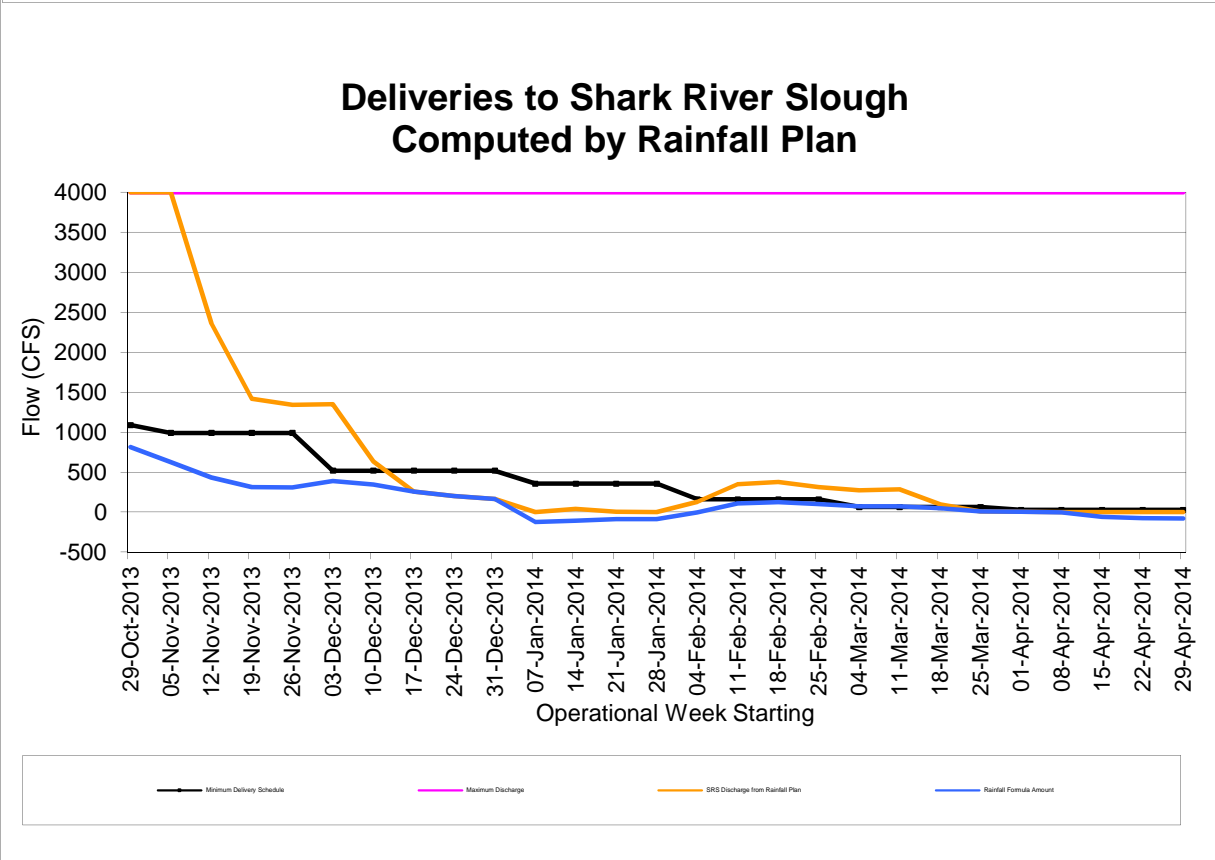
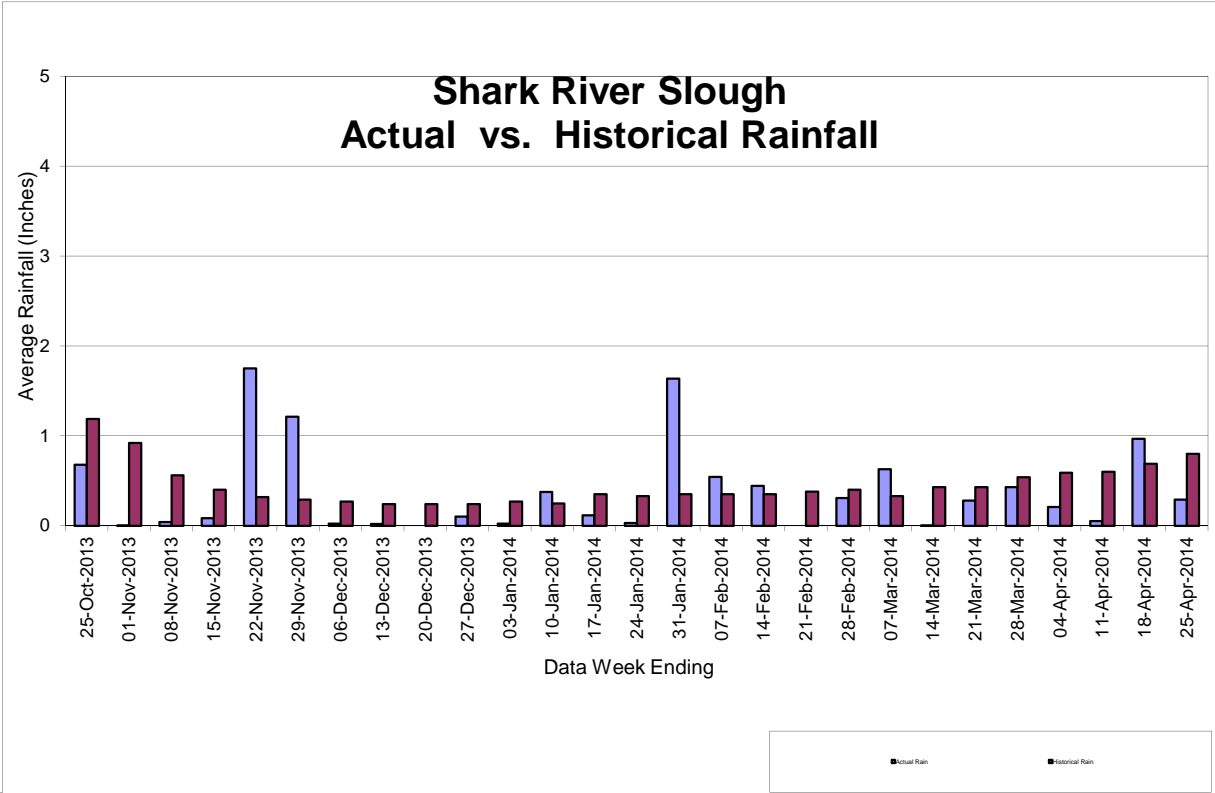
Rainfall Formula Amount -78 cfs  
 Last Week's Rainfall Formula -75 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms

RL1 -0.20	RL2 -1.35	RL3 -1.12
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**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow April 22, 2014 to April 28, 2014 0 cfs

S-12 Discharge 0 cfs  
 S-333 Discharge 0 cfs

----- Data Summary ----- April 11, 2014 to April 18, 2014  
 WCA-3A Stage (end of week) 9.19 ft. msl  
 Angel's 4.50 ft. msl  
 G3273 5.37 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.97	1.45
S-140		1.53
ENP		M

This Week's Avg	0.97	1.49
Pre-Project Avg	0.69	1.54

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is 0 cfs  
 Distance to Top of Zone E 0.13 feet  
 Distance to Bottom of Regulatory Zone 0.59 feet

----- Statistical Parameters -----

Rainfall Formula Amount -75 cfs  
 Last Week's Rainfall Formula -58 cfs  
 Pre-Project Mean Discharge 0 cfs

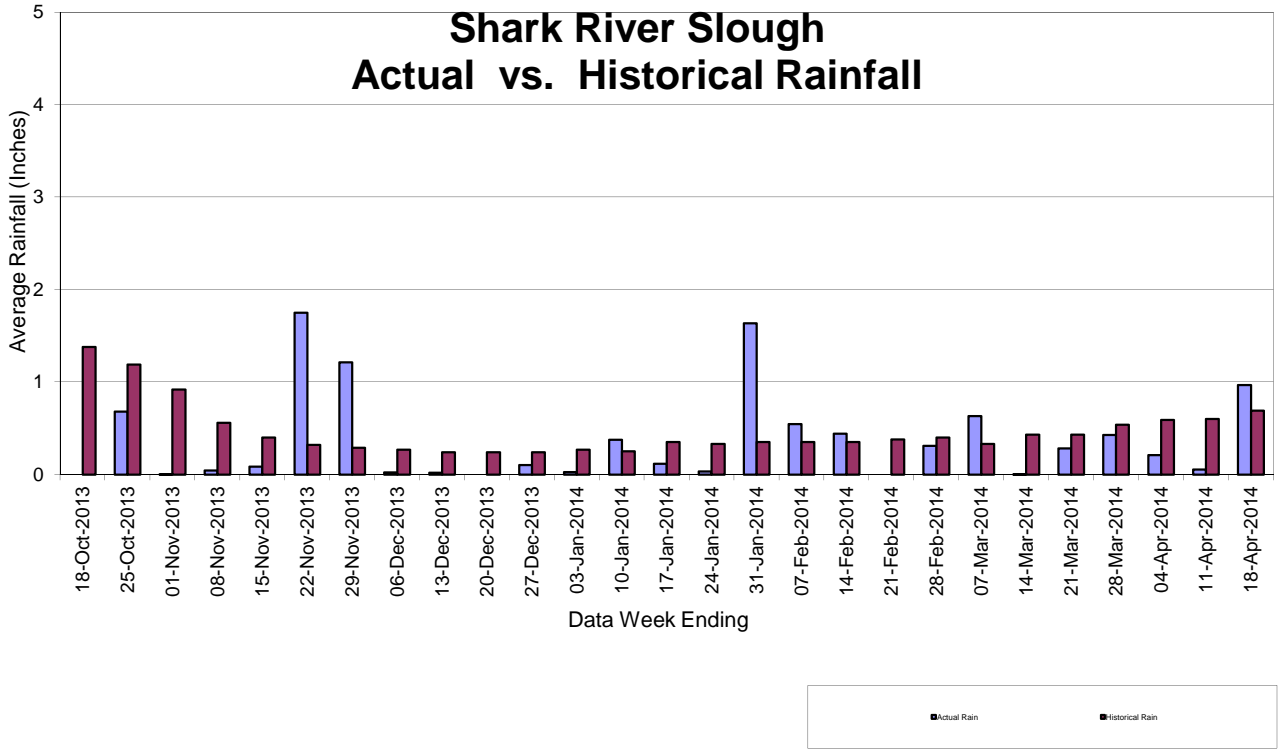
Rainfall Excess Terms

RL1 -0.42	RL2 -1.26	RL3 -0.46
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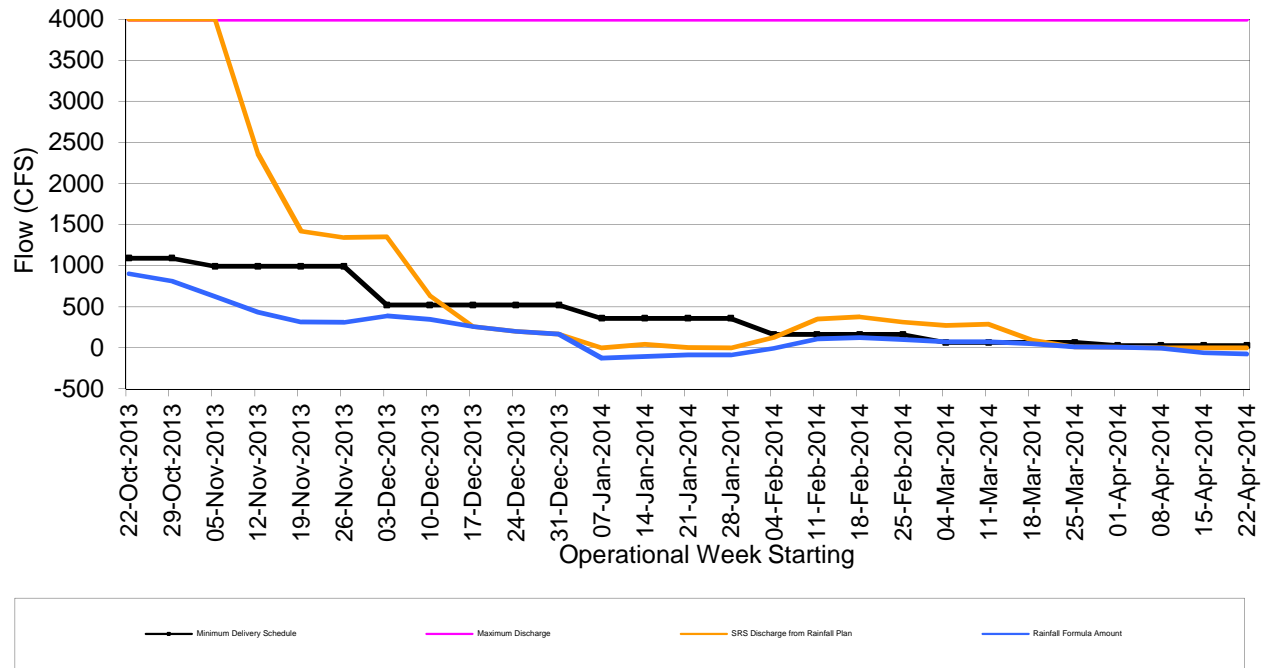
**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**

## Shark River Slough Actual vs. Historical Rainfall



## Deliveries to Shark River Slough Computed by Rainfall Plan



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow April 15, 2014 to April 21, 2014 0 cfs

S-12 Discharge 0 cfs  
 S-333 Discharge 0 cfs

----- Data Summary -----  
April 4, 2014 to April 11, 2014  
 WCA-3A Stage (end of week) 9.18 ft. msl  
 Angel's 4.76 ft. msl  
 G3273 5.55 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.05	1.68
S-140		1.81
ENP		M
-----		
This Week's Avg	0.05	1.75
Pre-Project Avg	0.60	1.51

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is 0 cfs  
 Distance to Top of Zone E 0.18 feet  
 Distance to Bottom of Regulatory Zone 0.64 feet

----- Statistical Parameters -----

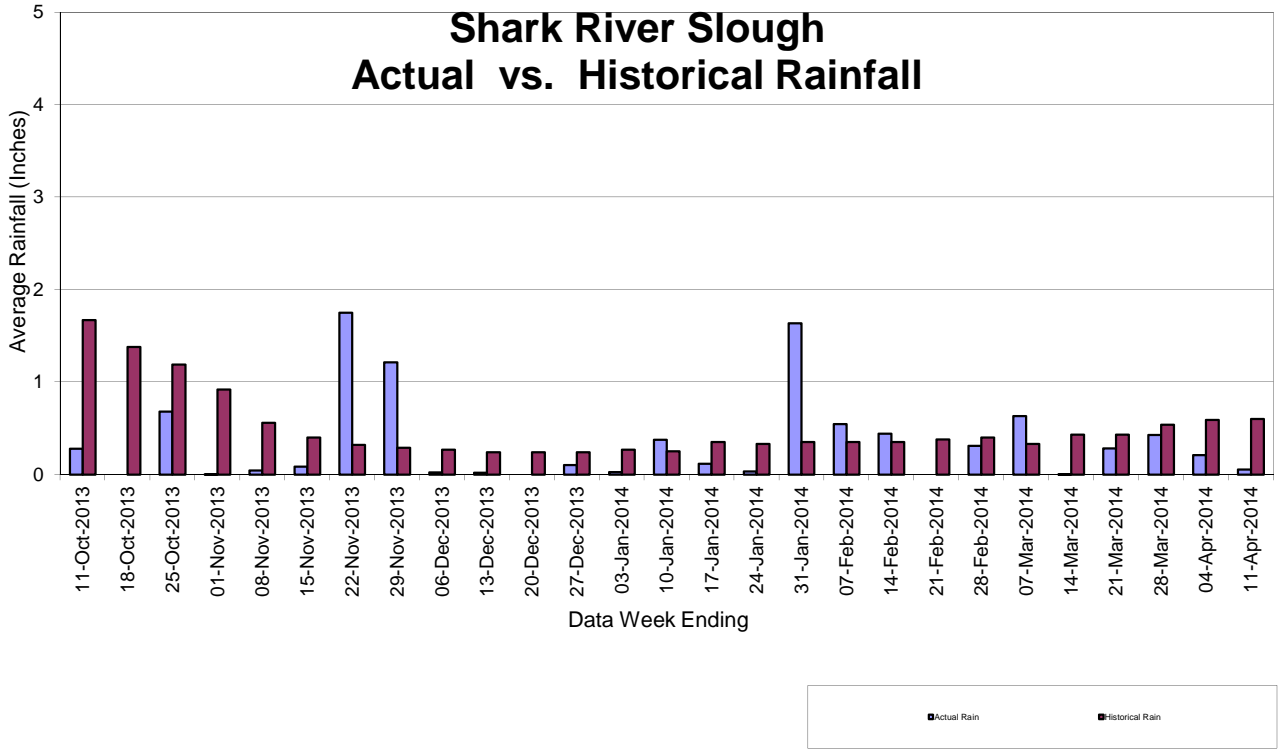
Rainfall Formula Amount -58 cfs  
 Last Week's Rainfall Formula -2 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
RL1 -1.08 RL2 -0.77 RL3 -0.38

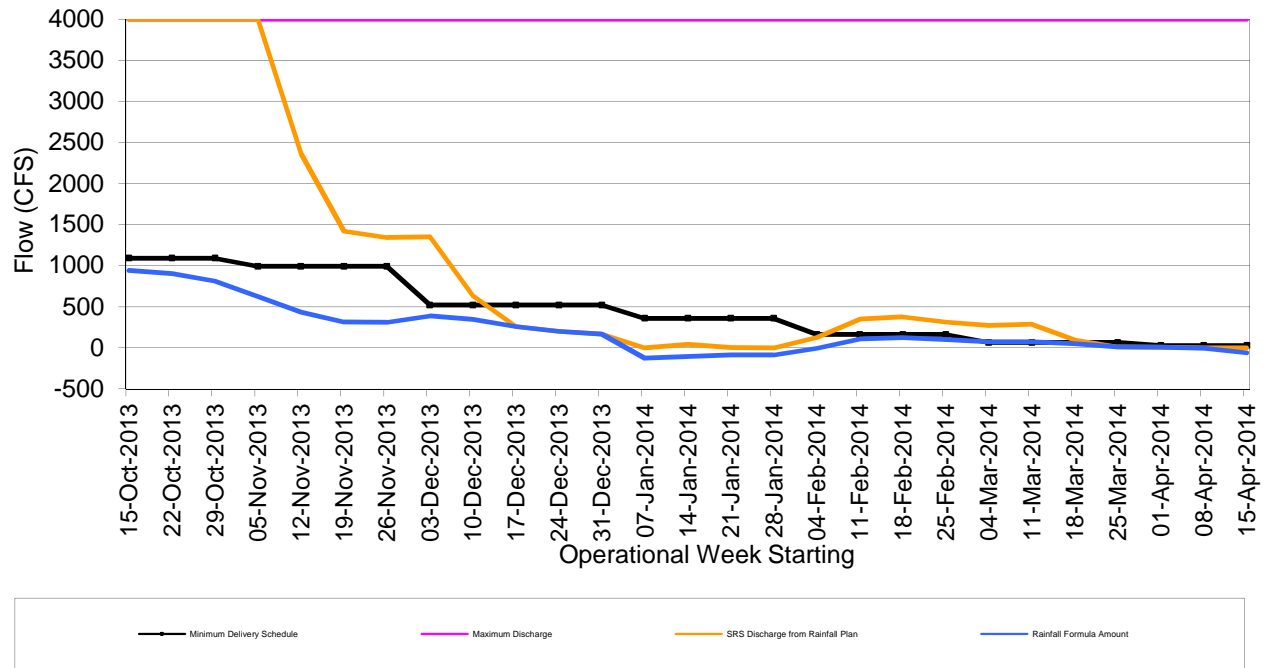
**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**

## Shark River Slough Actual vs. Historical Rainfall



## Deliveries to Shark River Slough Computed by Rainfall Plan



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow April 8, 2014 to April 14, 2014 0 cfs

S-12 Discharge 0 cfs  
 S-333 Discharge 0 cfs

----- Data Summary -----  
 WCA-3A Stage (end of week) March 28, 2014 to April 4, 2014  
 Angel's 9.29 ft. msl  
 G3273 5.10 ft. msl  
5.88 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.21	1.38
S-140		1.45
ENP		M

This Week's Avg	0.21	1.42
Pre-Project Avg	0.59	1.47

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is 0 cfs  
 Distance to Top of Zone E 0.12 feet  
 Distance to Bottom of Regulatory Zone 0.58 feet

----- Statistical Parameters -----

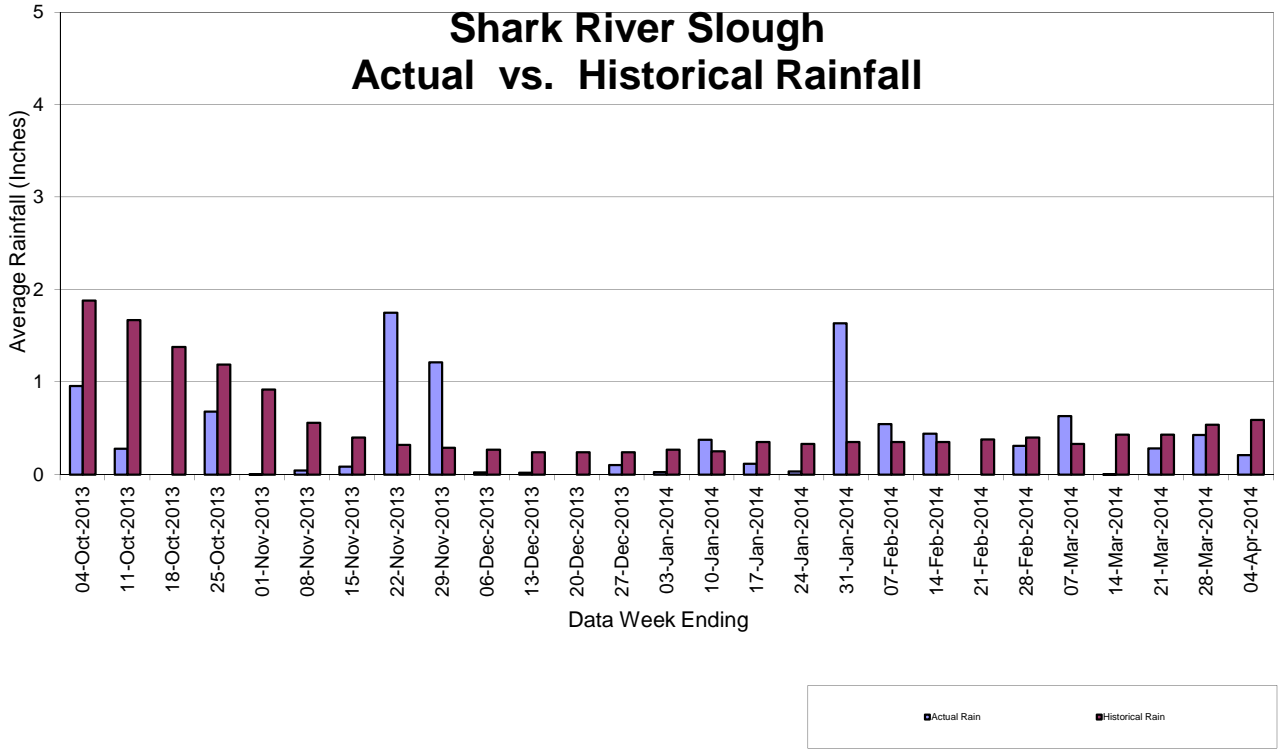
Rainfall Formula Amount -2 cfs  
 Last Week's Rainfall Formula 7 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
RL1 -0.38 RL2 -0.91 RL3 1.16

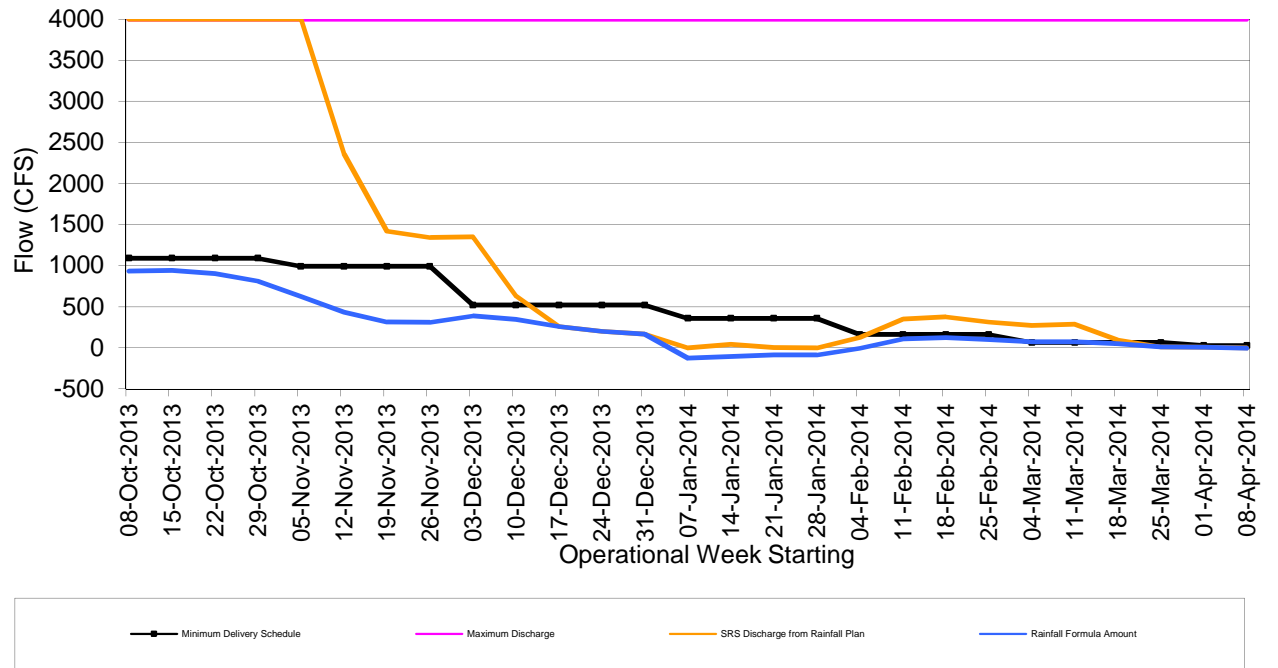
**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**

## Shark River Slough Actual vs. Historical Rainfall



## Deliveries to Shark River Slough Computed by Rainfall Plan



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow April 1, 2014 to April 7, 2014 7 cfs

S-12 Discharge 3 cfs  
 S-333 Discharge 4 cfs

----- Data Summary -----  
 WCA-3A Stage (end of week) March 21, 2014 to March 28, 2014  
 Angel's 9.38 ft. msl  
 G3273 5.37 ft. msl  
5.95 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.43	1.36
S-140		1.29
ENP		M

	0.43	1.32
This Week's Avg	0.54	1.41
Pre-Project Avg		

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is 0 cfs  
 Distance to Top of Zone E 0.07 feet  
 Distance to Bottom of Regulatory Zone 0.54 feet

----- Statistical Parameters -----

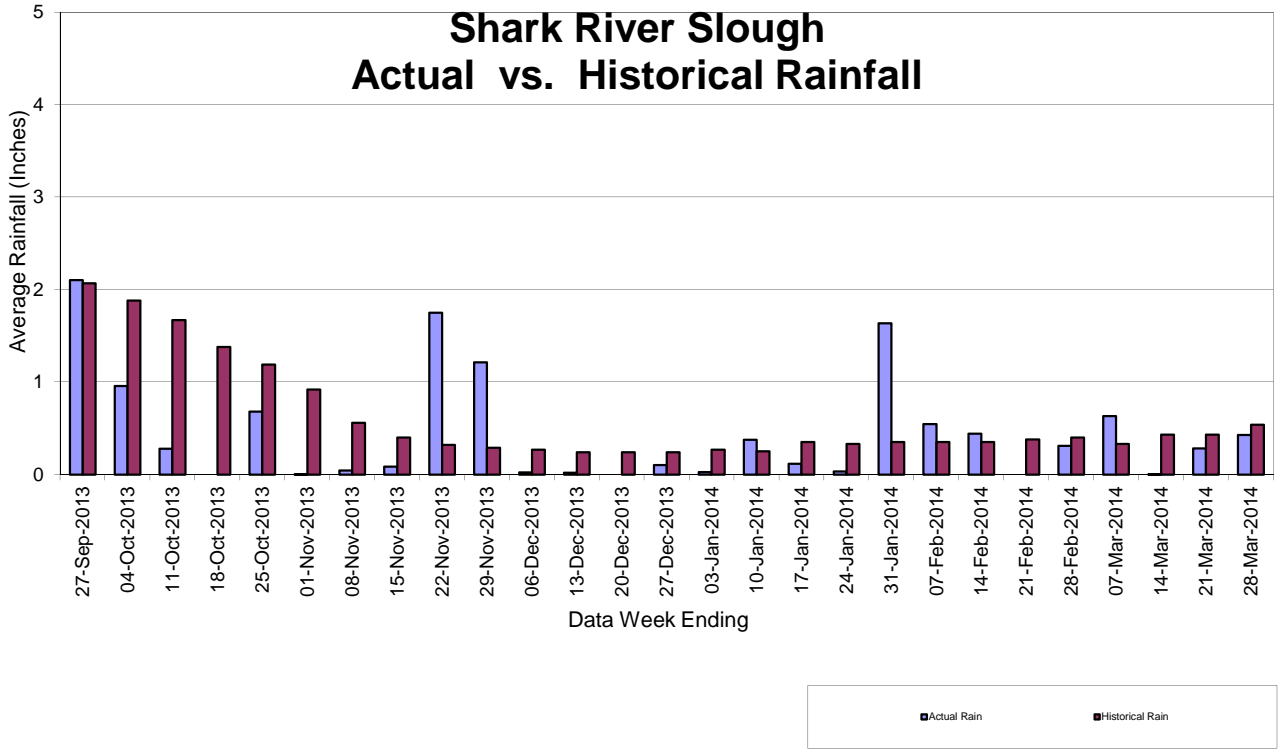
Rainfall Formula Amount 7 cfs  
 Last Week's Rainfall Formula 11 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
RL1 -0.27 RL2 -1.12 RL3 1.30

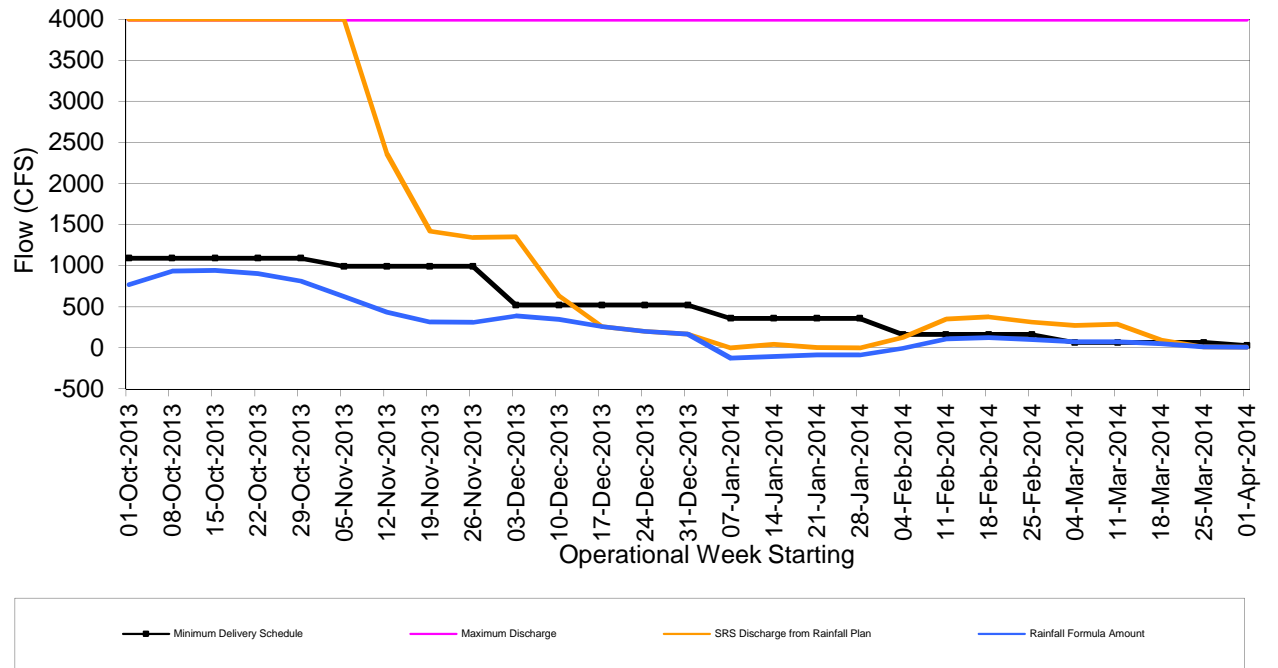
**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**

## Shark River Slough Actual vs. Historical Rainfall



## Deliveries to Shark River Slough Computed by Rainfall Plan





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow **March 25, 2014** to **March 31, 2014** **11 cfs**

S-12 Discharge **5 cfs**  
 S-333 Discharge **6 cfs**

----- **Data Summary** -----  
**March 14, 2014** to **March 21, 2014**  
 WCA-3A Stage (end of week) **9.48** ft. msl  
 Angel's **5.32** ft. msl  
 G3273 **5.94** ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	<b>0.28</b>	<b>1.50</b>
S-140		<b>1.43</b>
ENP		<b>M</b>
-----		
This Week's Avg	<b>0.28</b>	<b>1.47</b>
Pre-Project Avg	<b>0.43</b>	<b>1.36</b>

----- **Transition Zone Information** -----

**WCA-3A is in Zone E**

Supplemental discharge is **0 cfs**  
 Distance to Top of Zone E **0.02 feet**  
 Distance to Bottom of Regulatory Zone **0.49 feet**

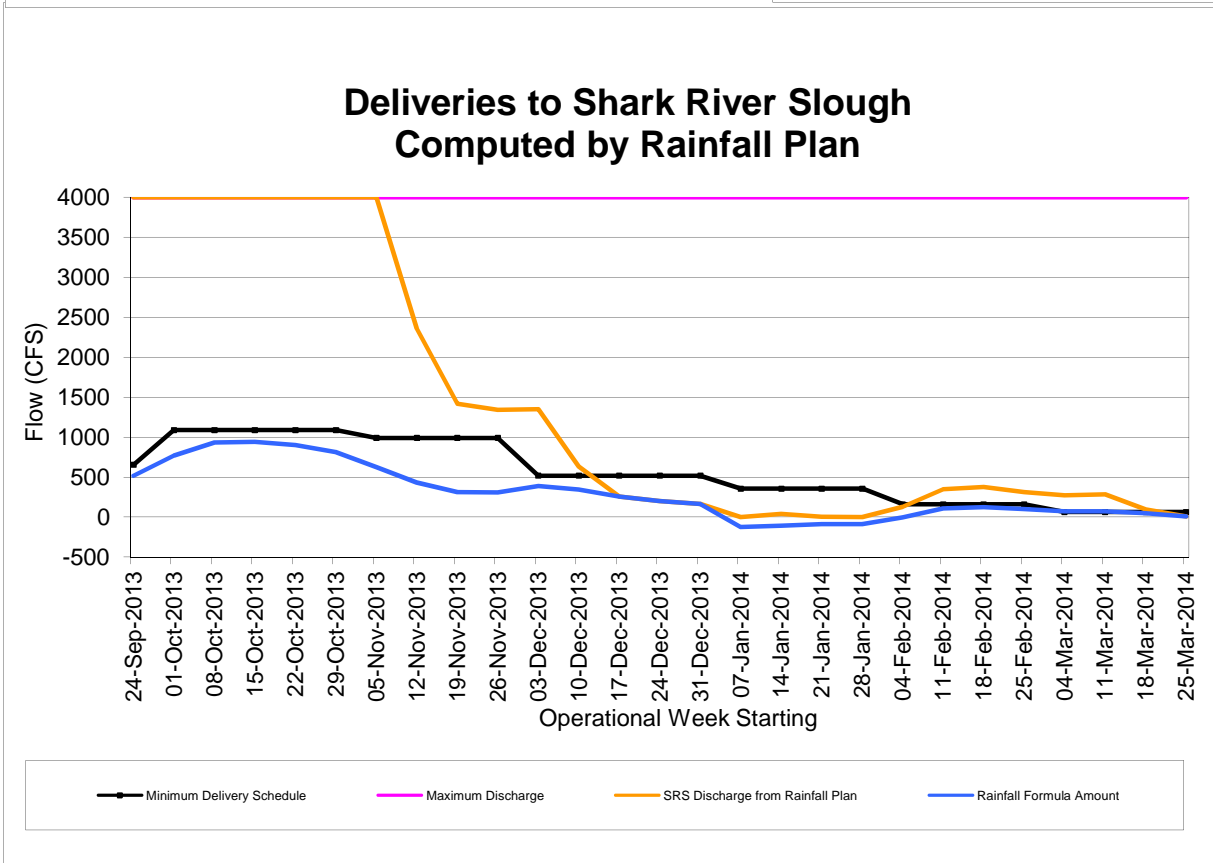
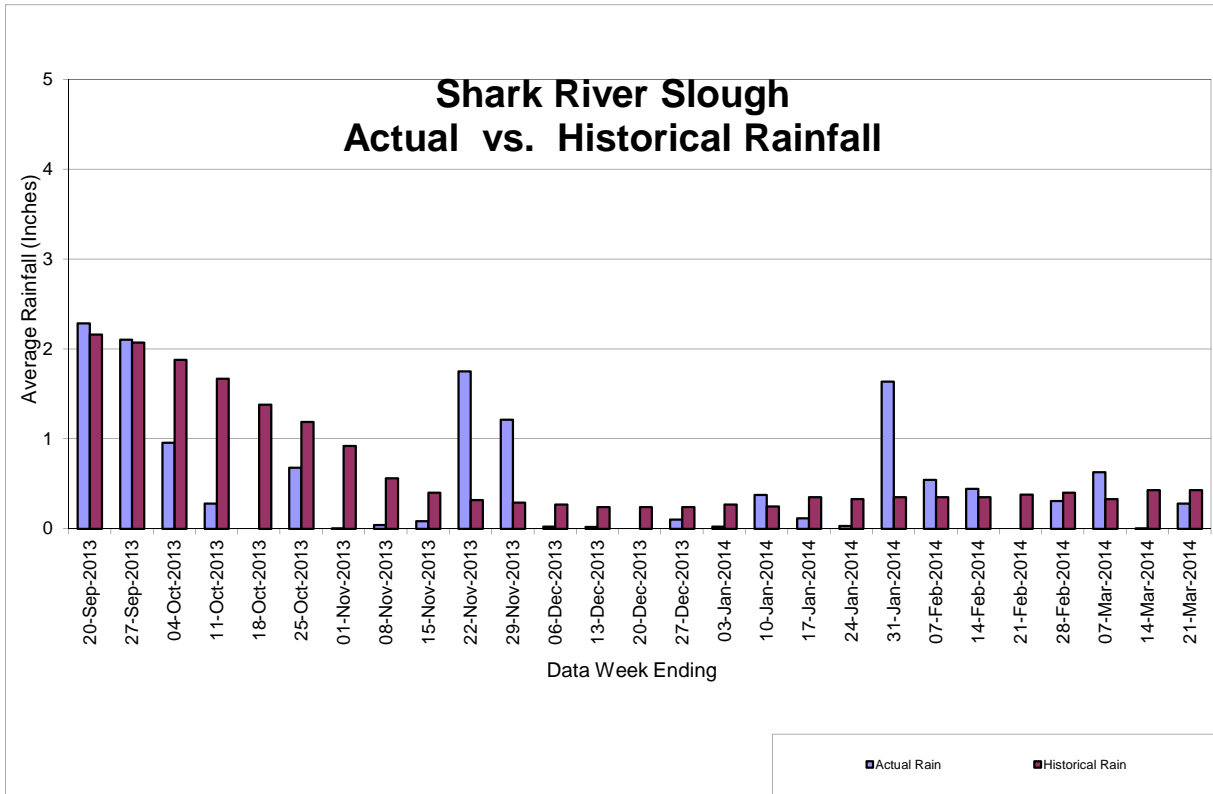
----- **Statistical Parameters** -----

Rainfall Formula Amount **11 cfs**  
 Last Week's Rainfall Formula **51 cfs**  
 Pre-Project Mean Discharge **0 cfs**

Rainfall Excess Terms  
 RL1 **-0.88**                      RL2 **-0.46**                      RL3 **1.11**

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow March 18, 2014 to March 24, 2014 99 cfs

S-12 Discharge 45 cfs  
 S-333 Discharge 55 cfs

----- Data Summary -----  
March 7, 2014 to March 14, 2014  
 WCA-3A Stage (end of week) 9.56 ft. msl  
 Angel's 5.35 ft. msl  
 G3273 5.97 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.00	1.42
S-140		1.71
ENP		M

This Week's Avg	0.00	1.56
Pre-Project Avg	0.43	1.29

----- Transition Zone Information -----

**WCA-3A is in Zone E1**

Supplemental discharge is 48 cfs  
 Distance to Top of Zone E -0.02 feet  
 Distance to Bottom of Regulatory Zone 0.45 feet

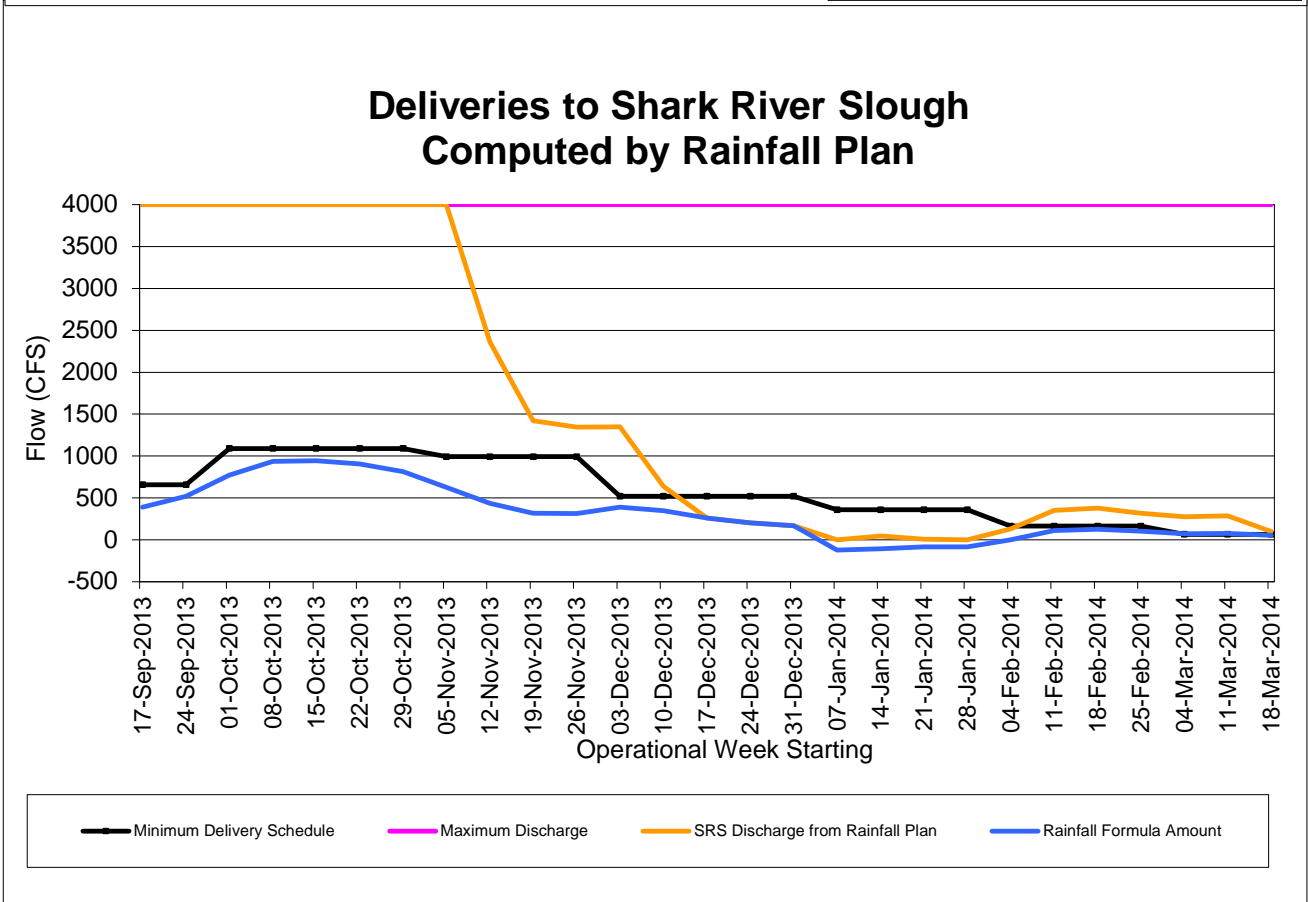
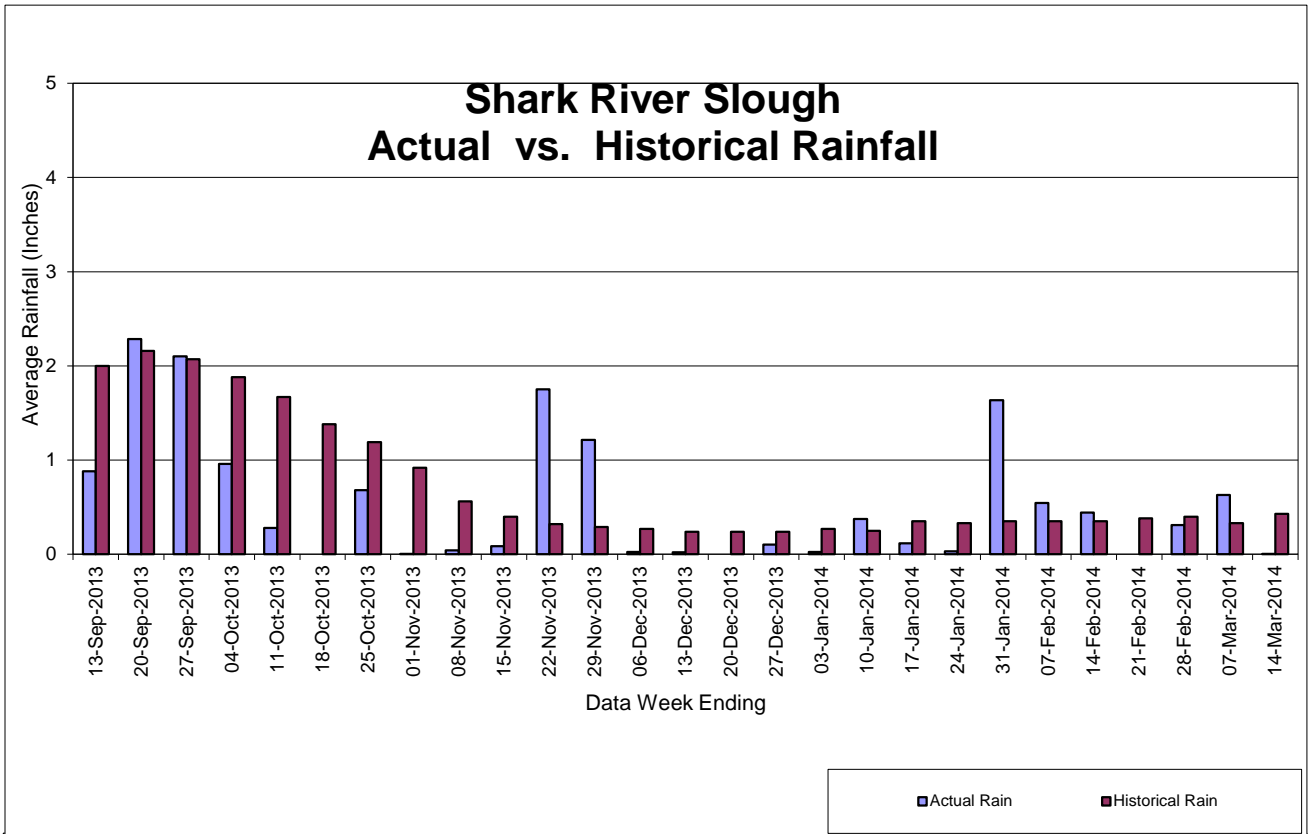
----- Statistical Parameters -----

Rainfall Formula Amount 51 cfs  
 Last Week's Rainfall Formula 75 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
RL1 -0.50 RL2 -0.38 RL3 0.96

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow March 11, 2014 to March 17, 2014 287 cfs

S-12 Discharge 129 cfs  
 S-333 Discharge 158 cfs

----- Data Summary -----  
 February 28, 2014 to March 7, 2014  
 WCA-3A Stage (end of week) 9.67 ft. msl  
 Angel's 5.60 ft. msl  
 G3273 6.15 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.63	1.36
S-140		1.46
ENP		M

This Week's Avg	0.63	1.41
Pre-Project Avg	0.33	1.22

----- Transition Zone Information -----

**WCA-3A is in Zone E1**

Supplemental discharge is 211 cfs  
 Distance to Top of Zone E -0.08 feet  
 Distance to Bottom of Regulatory Zone 0.39 feet

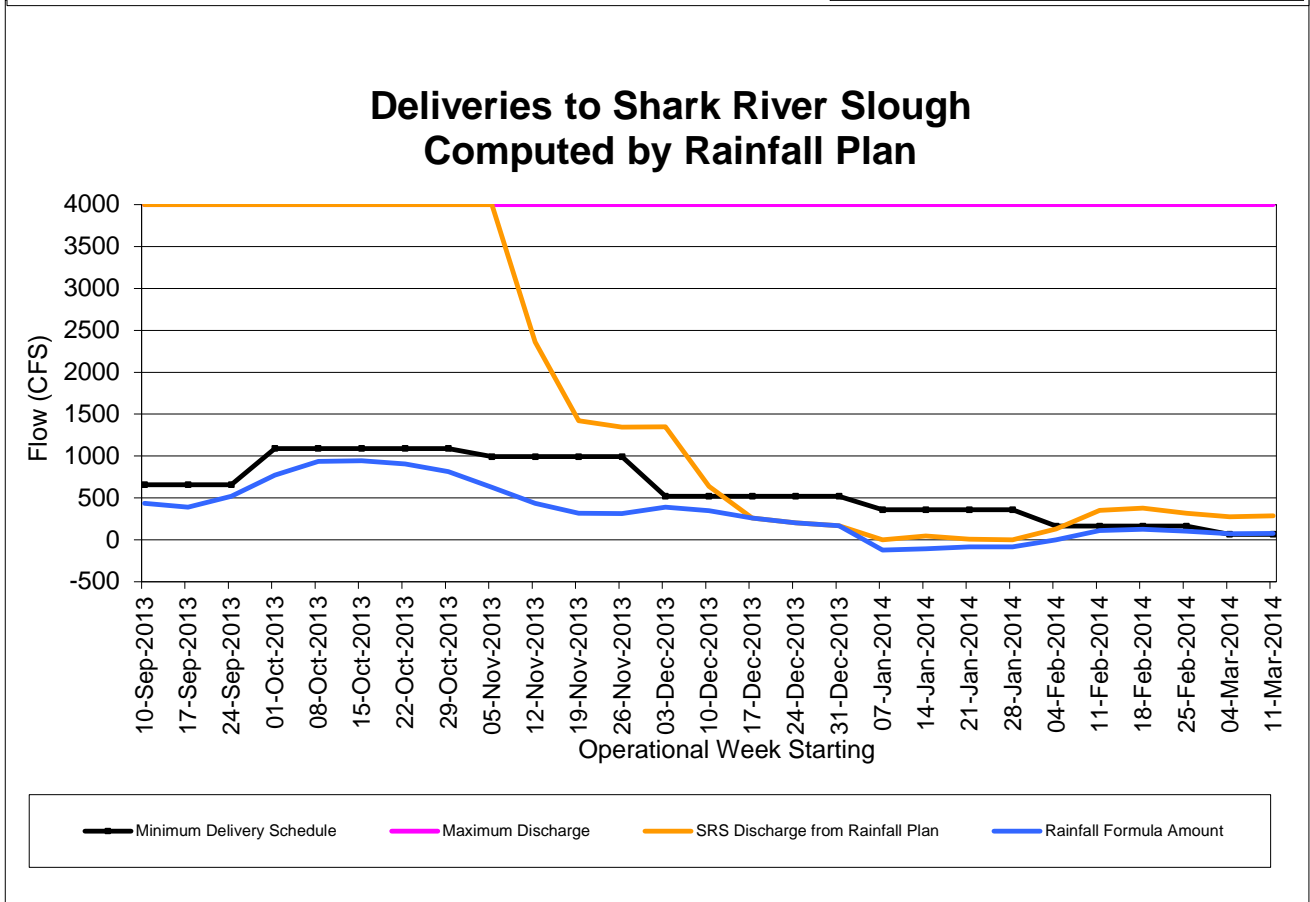
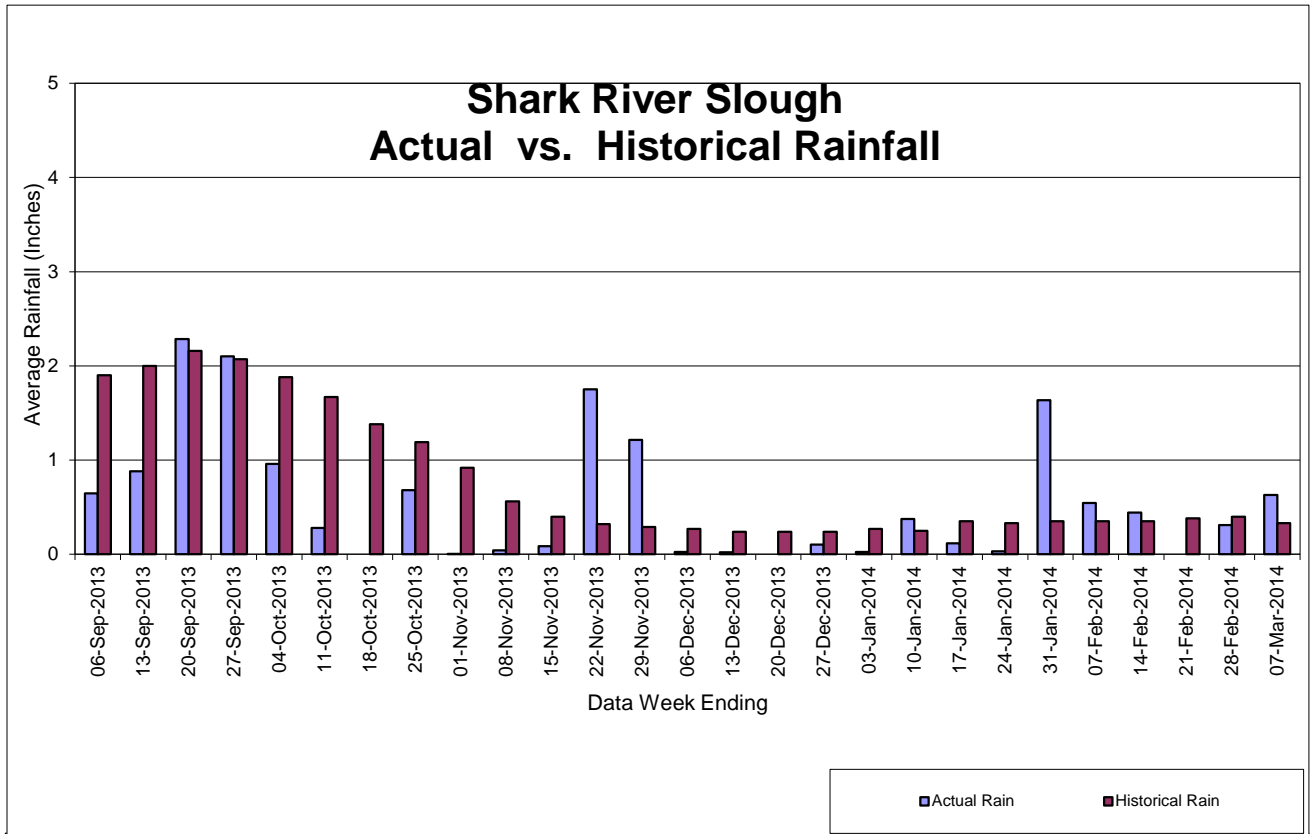
----- Statistical Parameters -----

Rainfall Formula Amount 75 cfs  
 Last Week's Rainfall Formula 73 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -0.03 RL2 1.16 RL3 -0.62

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow **March 4, 2014** to **March 10, 2014** **273 cfs**

S-12 Discharge 123 cfs  
 S-333 Discharge 150 cfs

----- **Data Summary** ----- **February 21, 2014** to **February 28, 2014**  
 WCA-3A Stage (end of week) 9.71 ft. msl  
 Angel's 5.54 ft. msl  
 G3273 6.14 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.31	1.29
S-140		1.24
ENP		M

This Week's Avg	0.31	1.26
Pre-Project Avg	0.40	1.15

----- **Transition Zone Information** -----

**WCA-3A is in Zone E1**

Supplemental discharge is 200 cfs  
 Distance to Top of Zone E -0.08 feet  
 Distance to Bottom of Regulatory Zone 0.40 feet

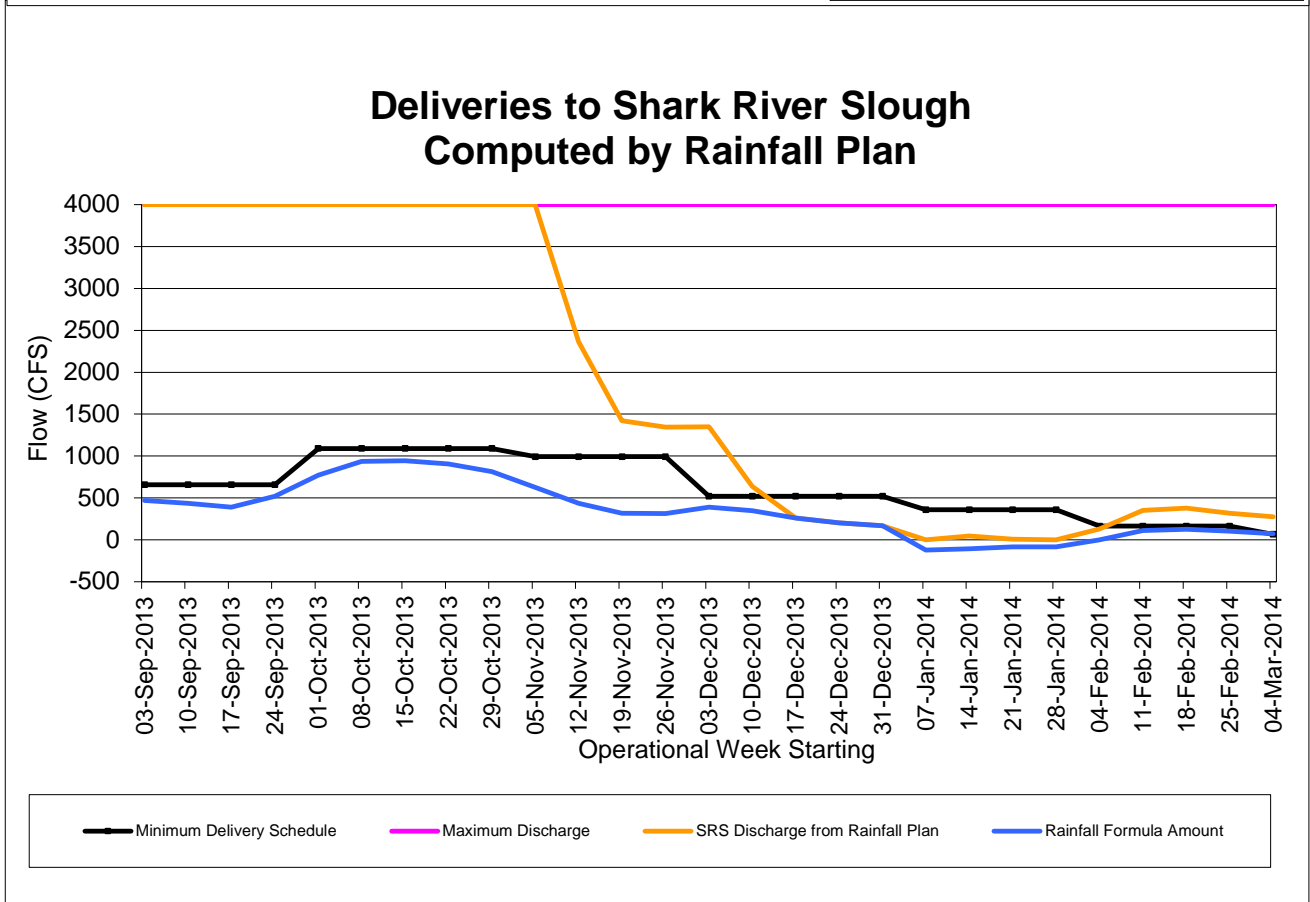
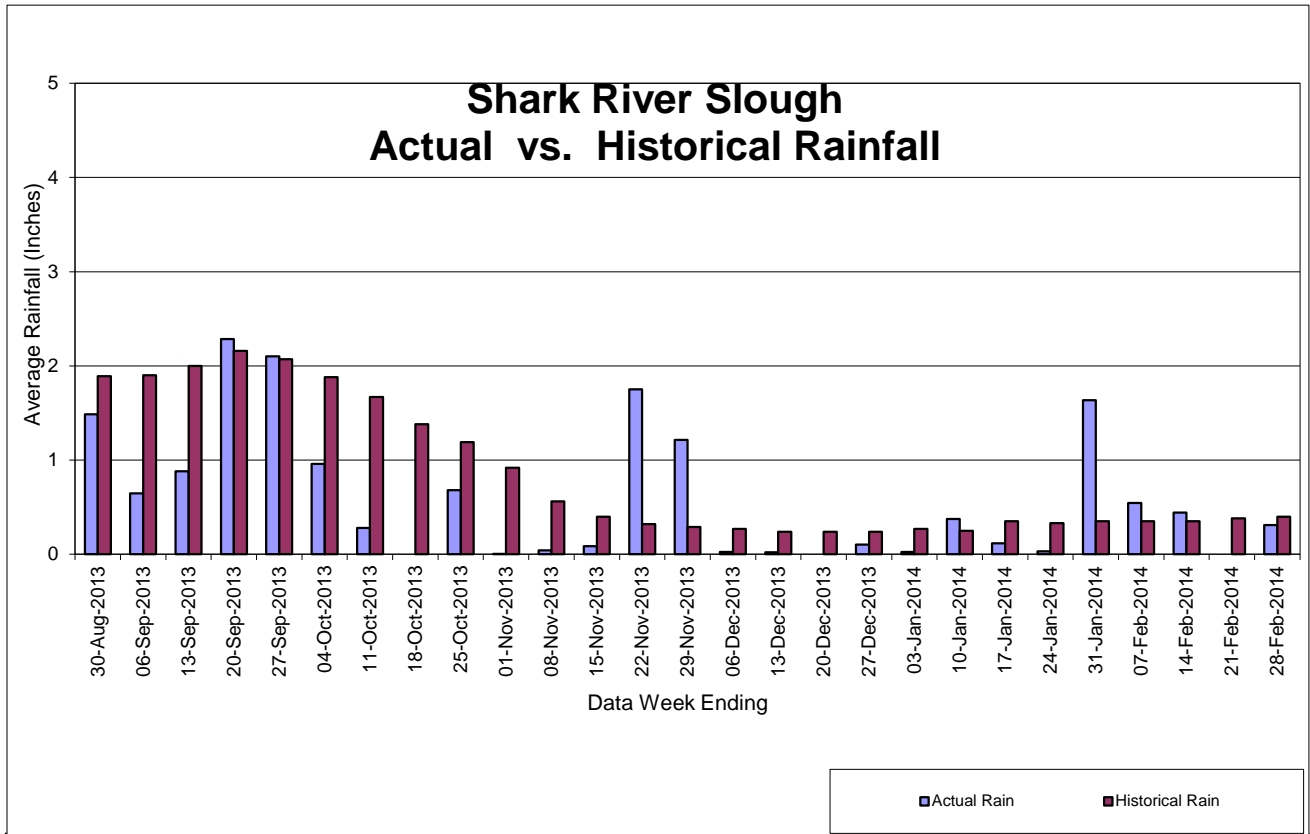
----- **Statistical Parameters** -----

Rainfall Formula Amount 73 cfs  
 Last Week's Rainfall Formula 103 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
RL1 -0.63 RL2 1.30 RL3 -0.50

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow February 25, 2014 to March 3, 2014 316 cfs

S-12 Discharge 142 cfs  
 S-333 Discharge 174 cfs

----- Data Summary -----  
 February 14, 2014 to February 21, 2014  
 WCA-3A Stage (end of week) 9.76 ft. msl  
 Angel's 5.61 ft. msl  
 G3273 6.28 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.00	1.12
S-140		1.21
ENP		M

This Week's Avg	0.00	1.17
Pre-Project Avg	0.38	1.08

----- Transition Zone Information -----

**WCA-3A is in Zone E1**

Supplemental discharge is 213 cfs  
 Distance to Top of Zone E -0.09 feet  
 Distance to Bottom of Regulatory Zone 0.39 feet

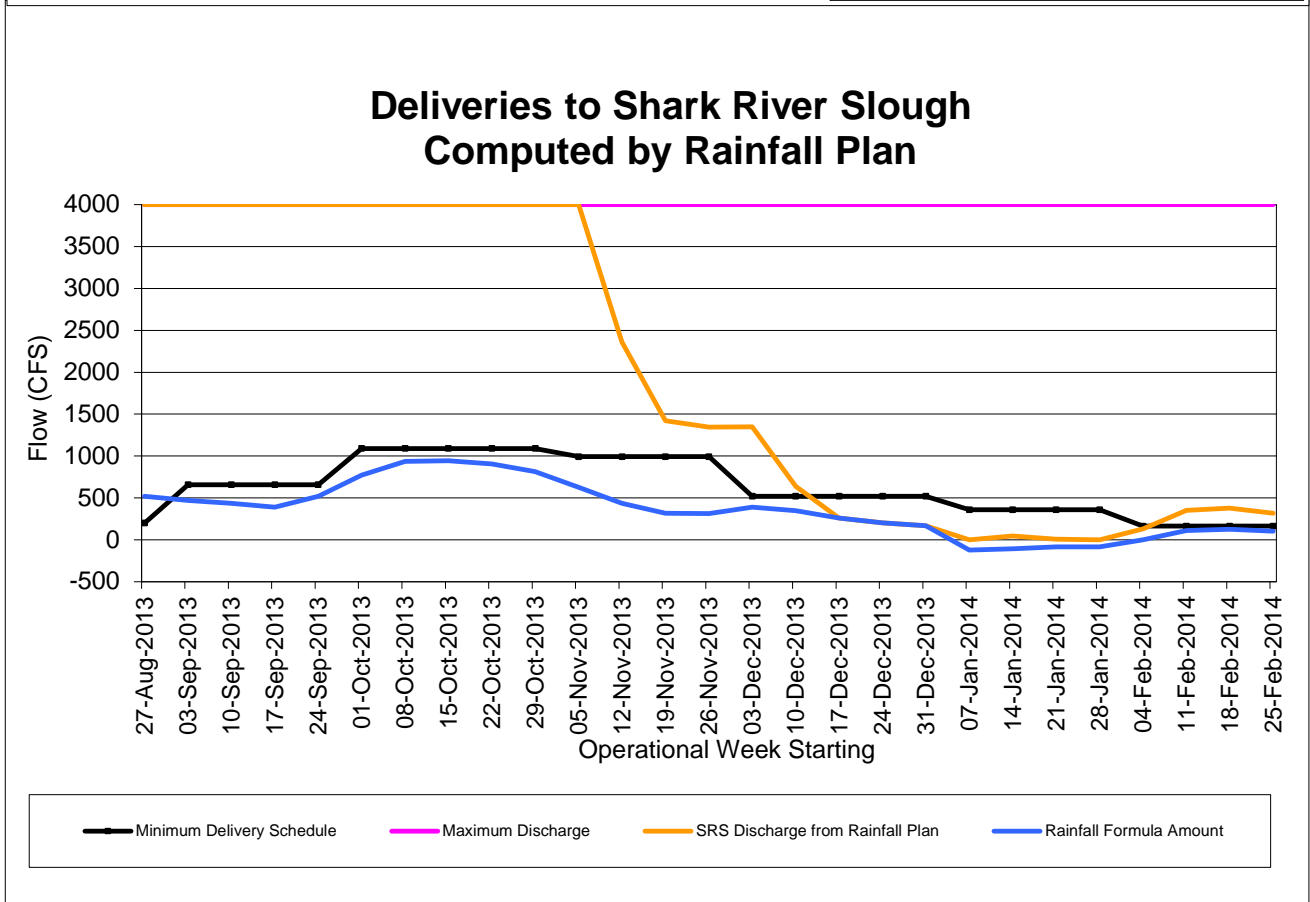
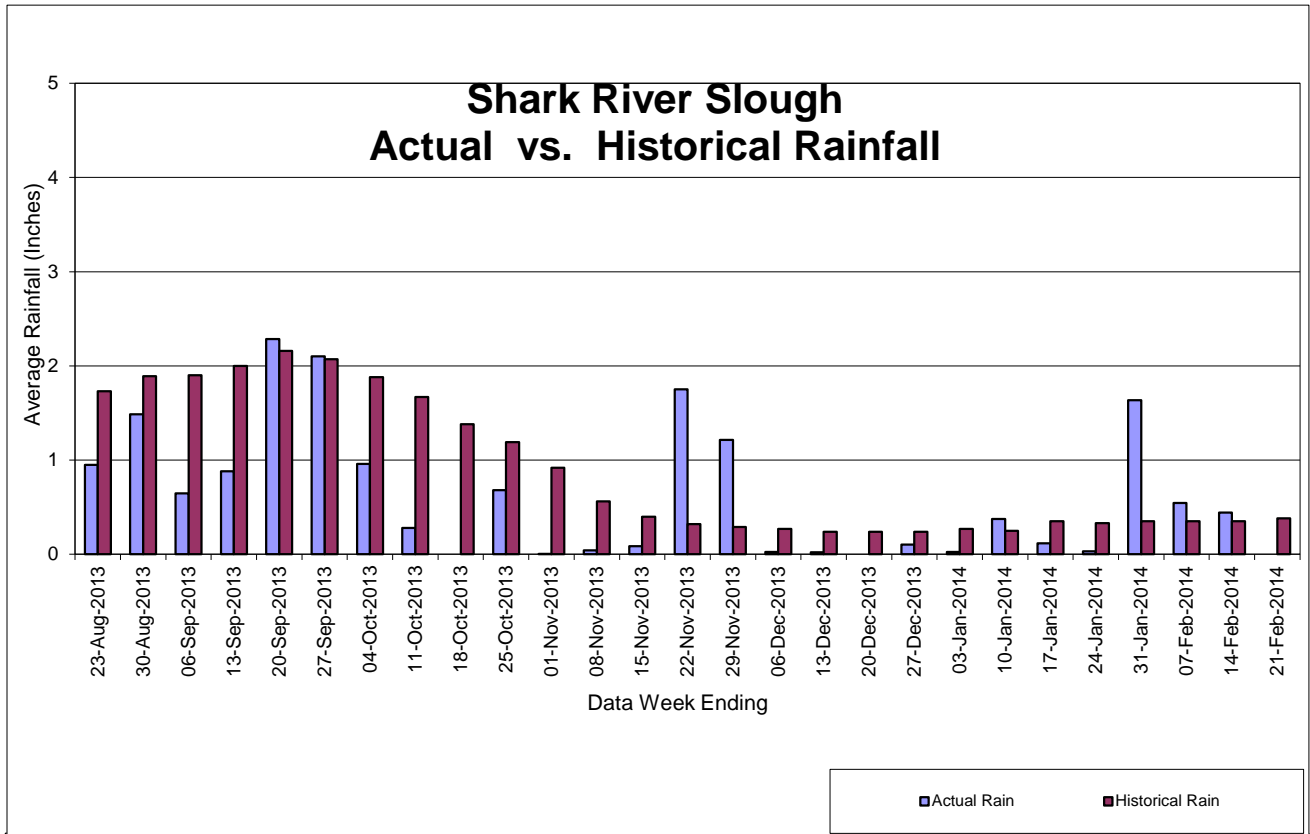
----- Statistical Parameters -----

Rainfall Formula Amount 103 cfs  
 Last Week's Rainfall Formula 126 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -0.43 RL2 1.11 RL3 -0.62

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow February 18, 2014 to February 24, 2014 378 cfs

S-12 Discharge 170 cfs  
 S-333 Discharge 208 cfs

----- Data Summary ----- February 7, 2014 to February 14, 2014  
 WCA-3A Stage (end of week) 9.82 ft. msl  
 Angel's 6.15 ft. msl  
 G3273 6.49 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.44	1.04
S-140		1.16
ENP		M

This Week's Avg	0.44	1.10
Pre-Project Avg	0.35	1.01

----- Transition Zone Information -----

**WCA-3A is in Zone E1**

Supplemental discharge is 252 cfs  
 Distance to Top of Zone E -0.10 feet  
 Distance to Bottom of Regulatory Zone 0.38 feet

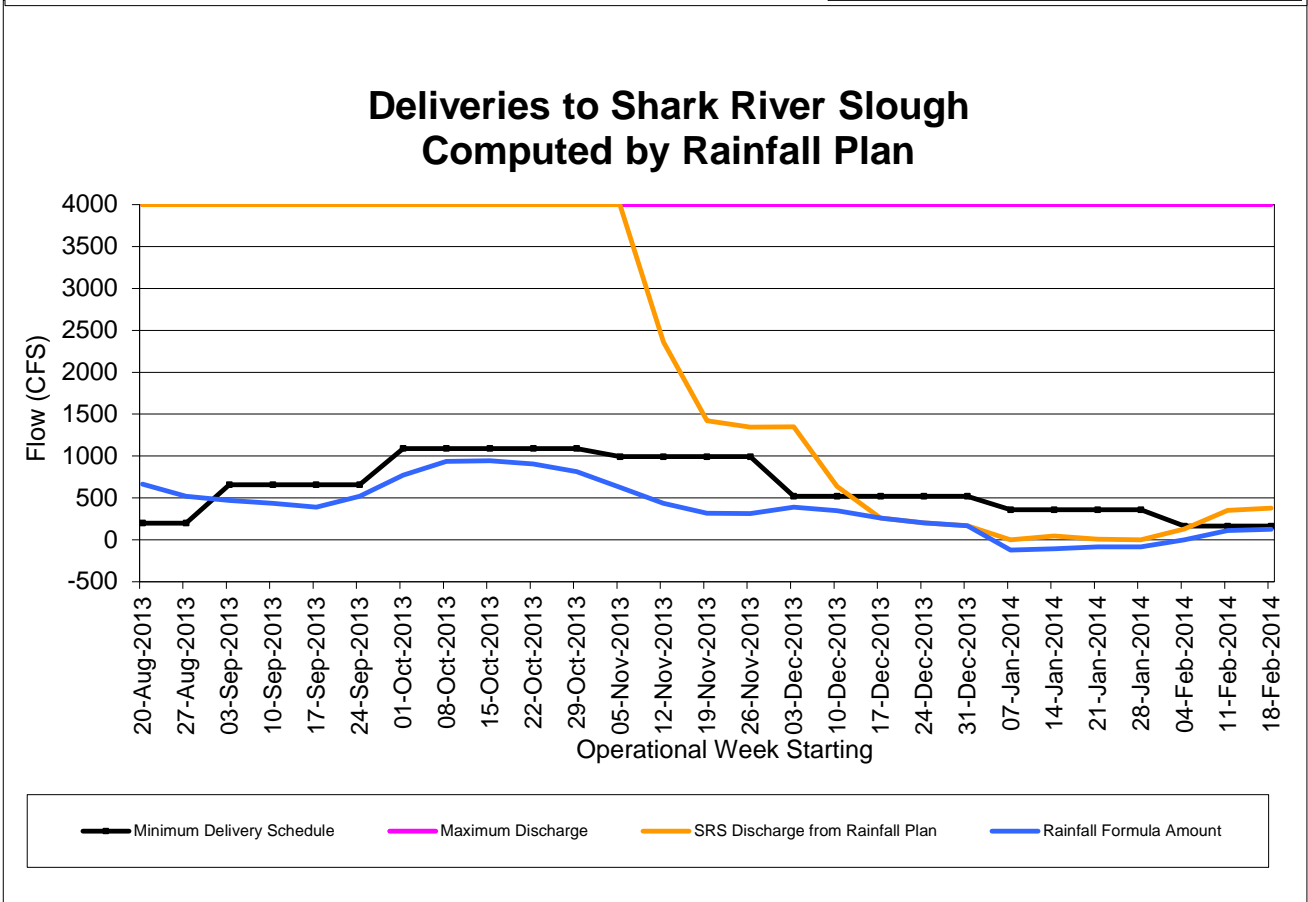
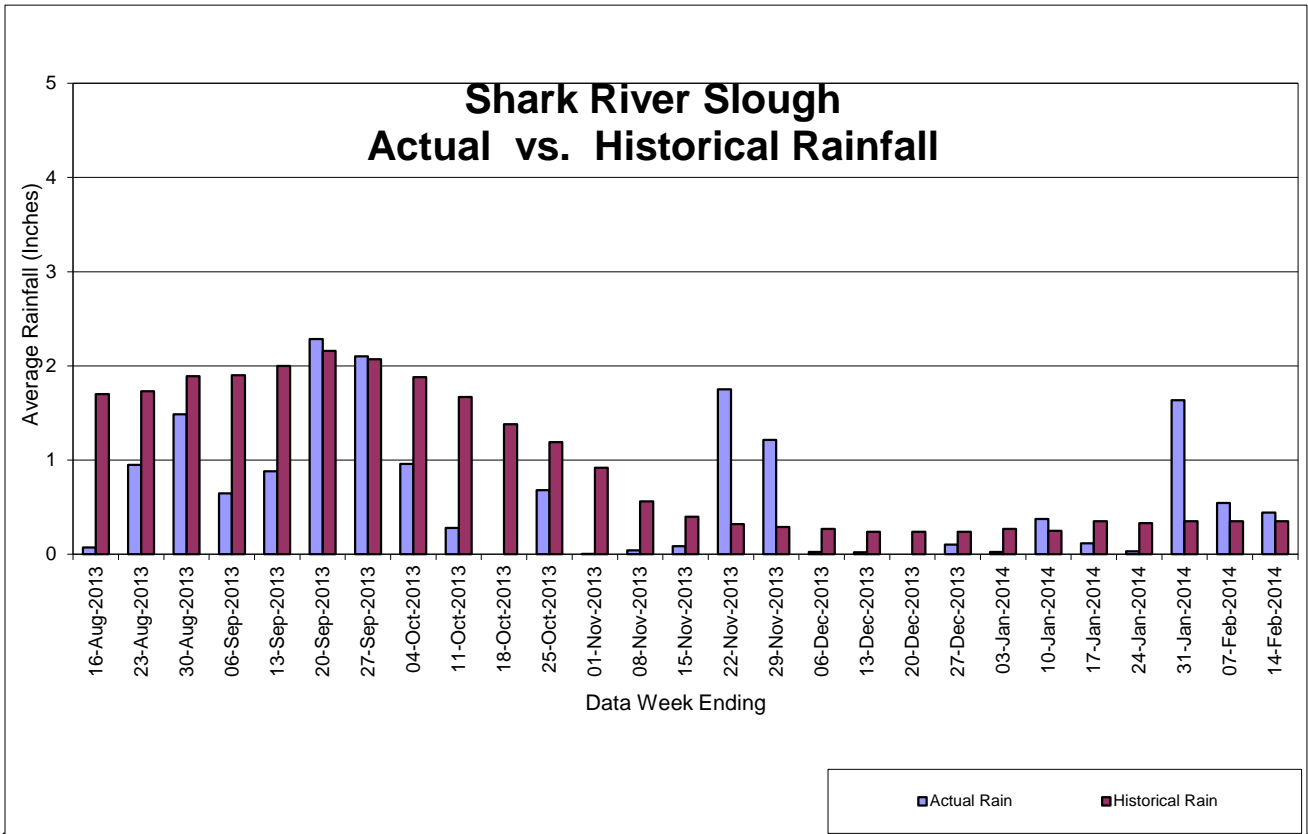
----- Statistical Parameters -----

Rainfall Formula Amount 126 cfs  
 Last Week's Rainfall Formula 110 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
RL1 0.25 RL2 0.96 RL3 -0.95

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow February 11, 2014 to February 17, 2014 350 cfs

S-12 Discharge 157 cfs  
 S-333 Discharge 192 cfs

----- Data Summary -----  
 January 31, 2014 to February 7, 2014  
 WCA-3A Stage (end of week) 9.86 ft. msl  
 Angel's 5.75 ft. msl  
 G3273 6.41 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.54	0.90
S-140		0.89
ENP		M

This Week's Avg	0.54	0.90
Pre-Project Avg	0.35	0.94

----- Transition Zone Information -----

**WCA-3A is in Zone E1**

Supplemental discharge is 240 cfs  
 Distance to Top of Zone E -0.10 feet  
 Distance to Bottom of Regulatory Zone 0.39 feet

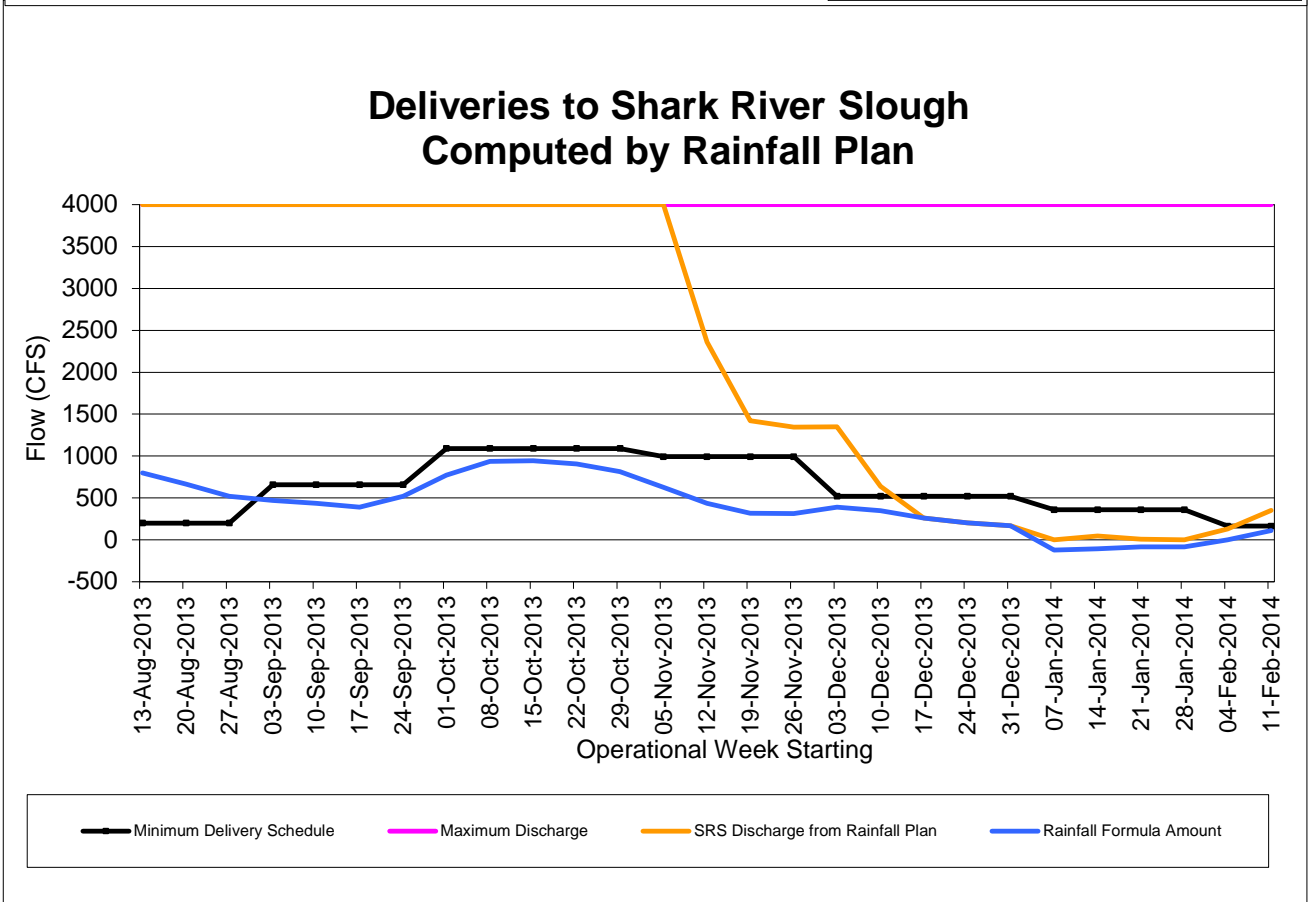
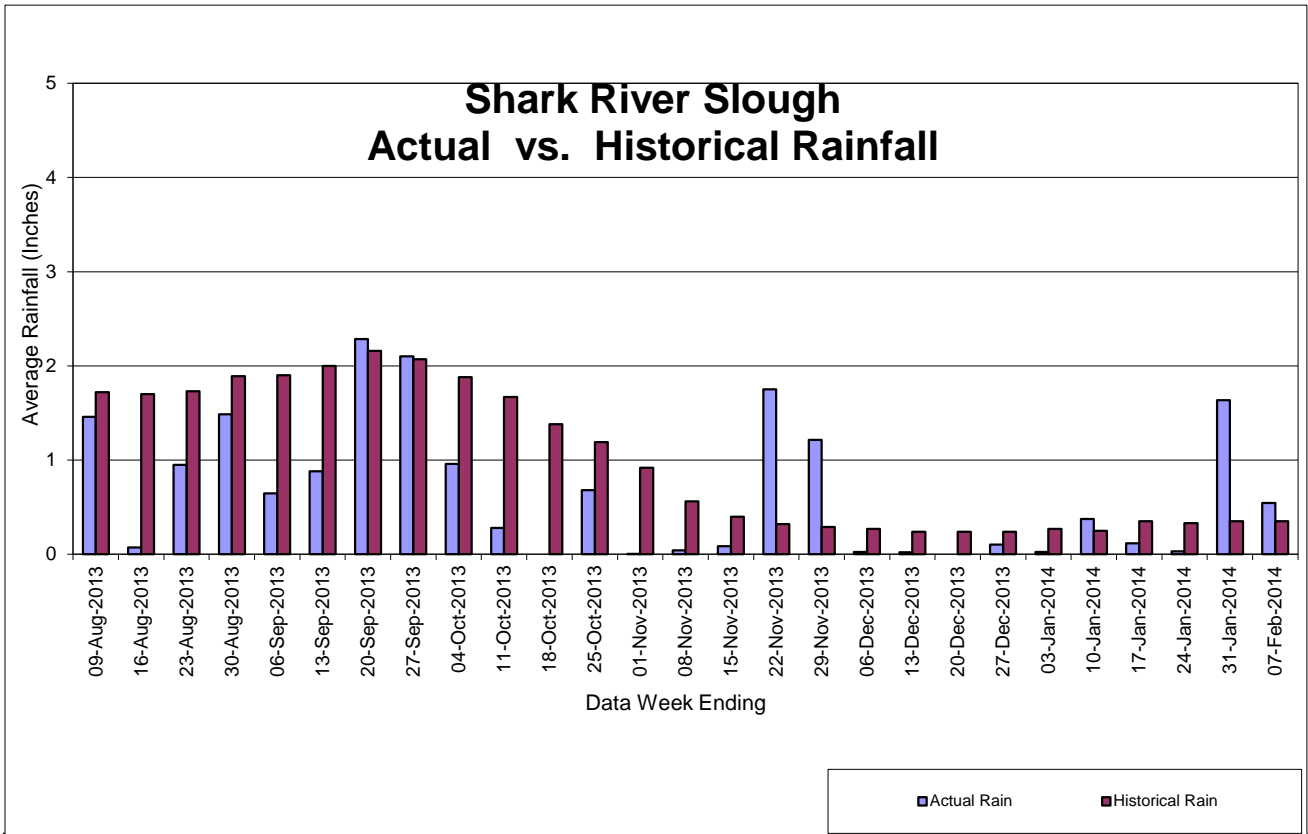
----- Statistical Parameters -----

Rainfall Formula Amount 110 cfs  
 Last Week's Rainfall Formula -2 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 1.58 RL2 -0.62 RL3 -0.98

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow February 4, 2014 to February 10, 2014 128 cfs

S-12 Discharge 58 cfs  
 S-333 Discharge 71 cfs

----- Data Summary -----  
 January 24, 2014 to January 31, 2014  
 WCA-3A Stage (end of week) 9.86 ft. msl  
 Angel's 6.20 ft. msl  
 G3273 6.58 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	1.64	0.78
S-140		0.80
ENP		M

This Week's Avg	1.64	0.79
Pre-Project Avg	0.35	0.88

----- Transition Zone Information -----

**WCA-3A is in Zone E1**

Supplemental discharge is 128 cfs  
 Distance to Top of Zone E -0.05 feet  
 Distance to Bottom of Regulatory Zone 0.43 feet

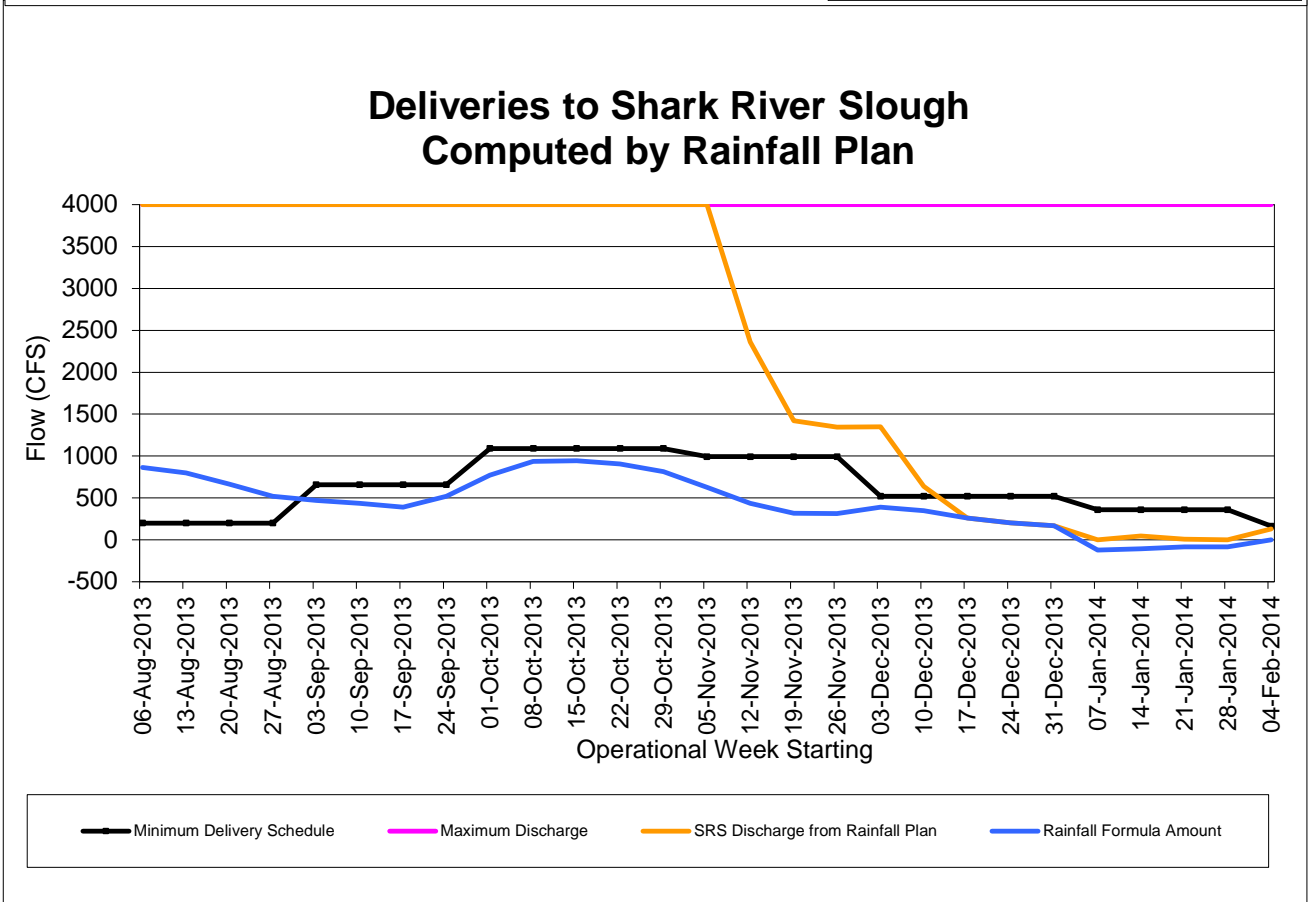
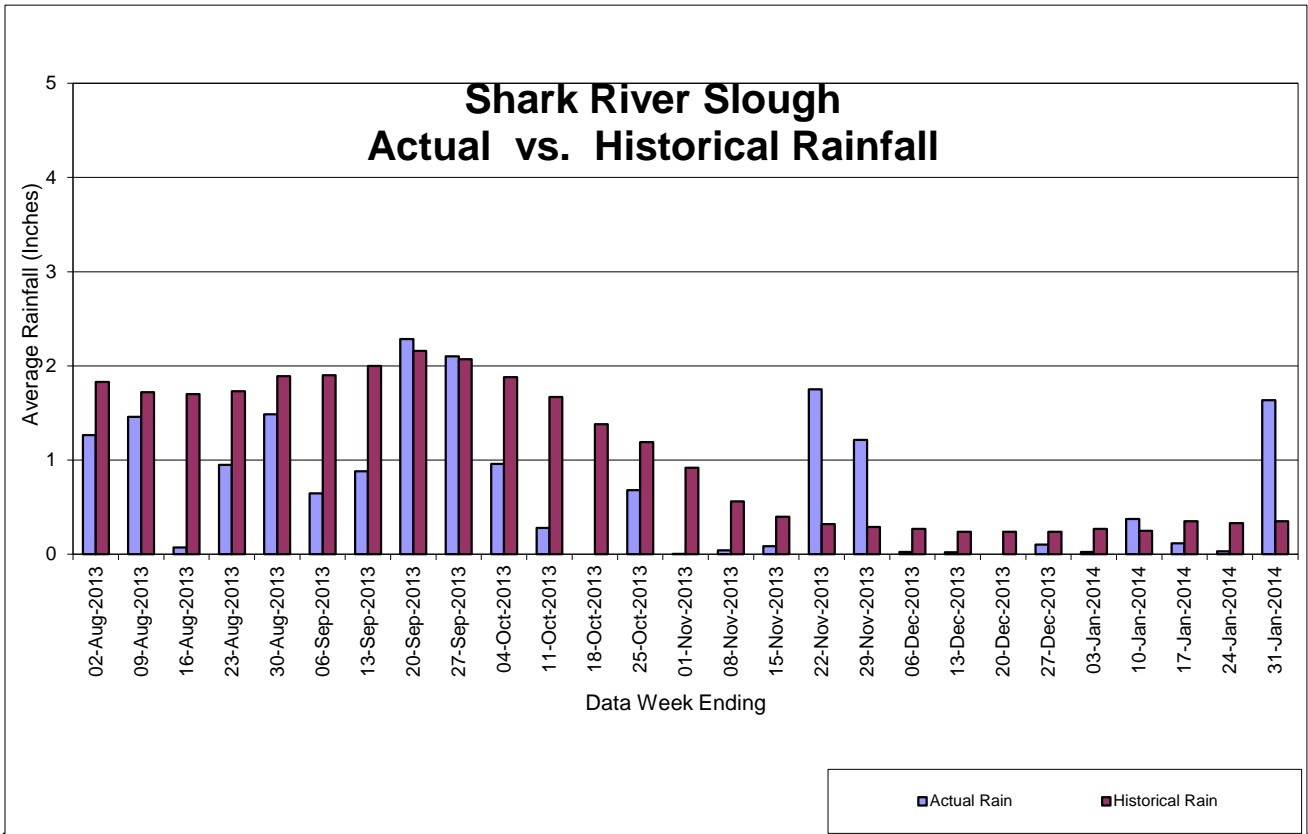
----- Statistical Parameters -----

Rainfall Formula Amount -2 cfs  
 Last Week's Rainfall Formula -85 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 1.05 RL2 -0.50 RL3 0.11

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**





## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow January 28, 2014 to February 3, 2014 0 cfs

S-12 Discharge 0 cfs  
 S-333 Discharge 0 cfs

----- Data Summary -----  
 January 17, 2014 to January 24, 2014  
 WCA-3A Stage (end of week) 9.82 ft. msl  
 Angel's 5.77 ft. msl  
 G3273 6.49 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.03	0.81

S-140		0.86
-------	--	------

ENP		M
-----	--	---

This Week's Avg	0.03	0.84
Pre-Project Avg	0.33	0.83

----- Transition Zone Information -----

**WCA-3A is in Zone E**

Supplemental discharge is	0 cfs
Distance to Top of Zone E	0.03 feet
Distance to Bottom of Regulatory Zone	0.52 feet

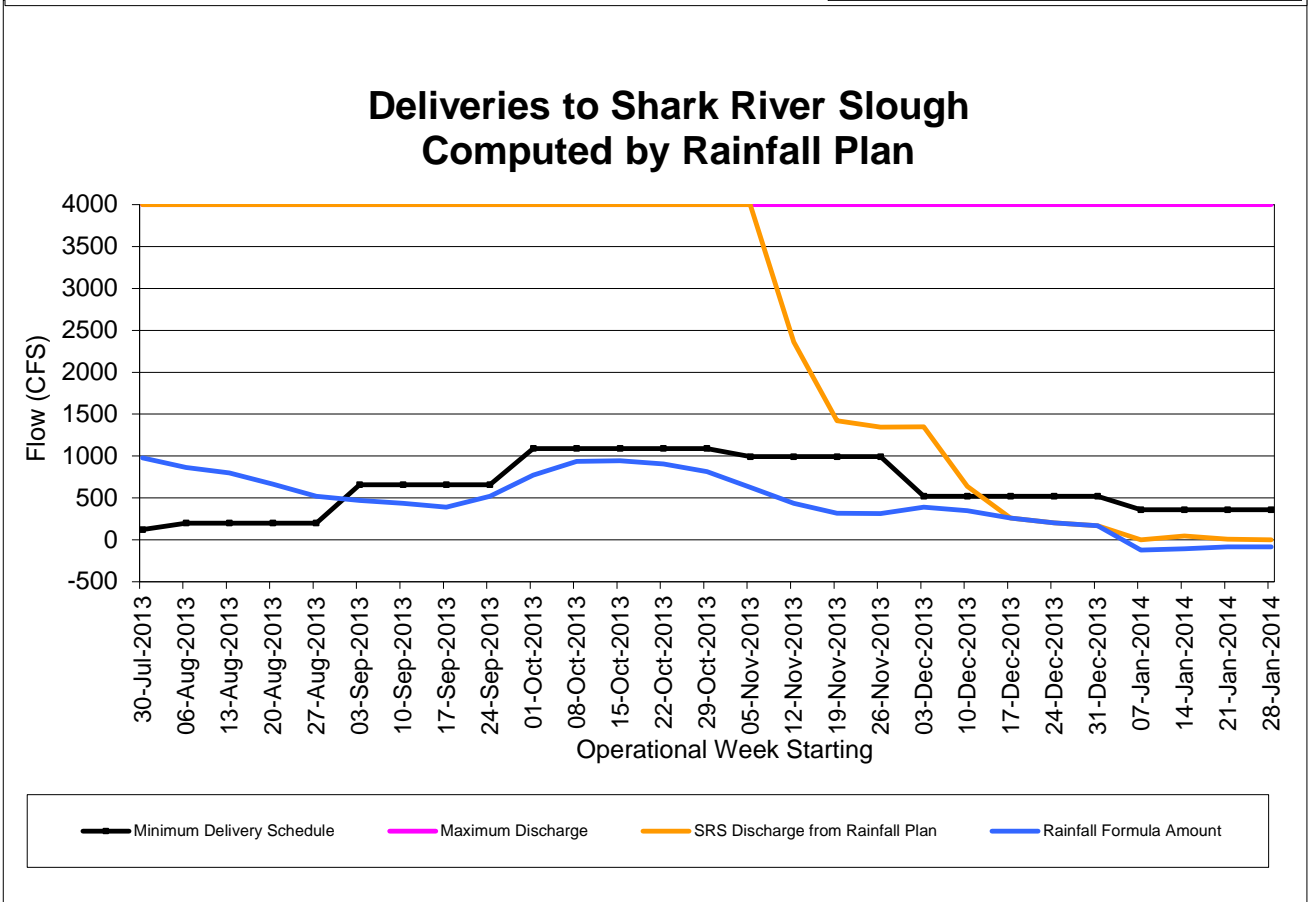
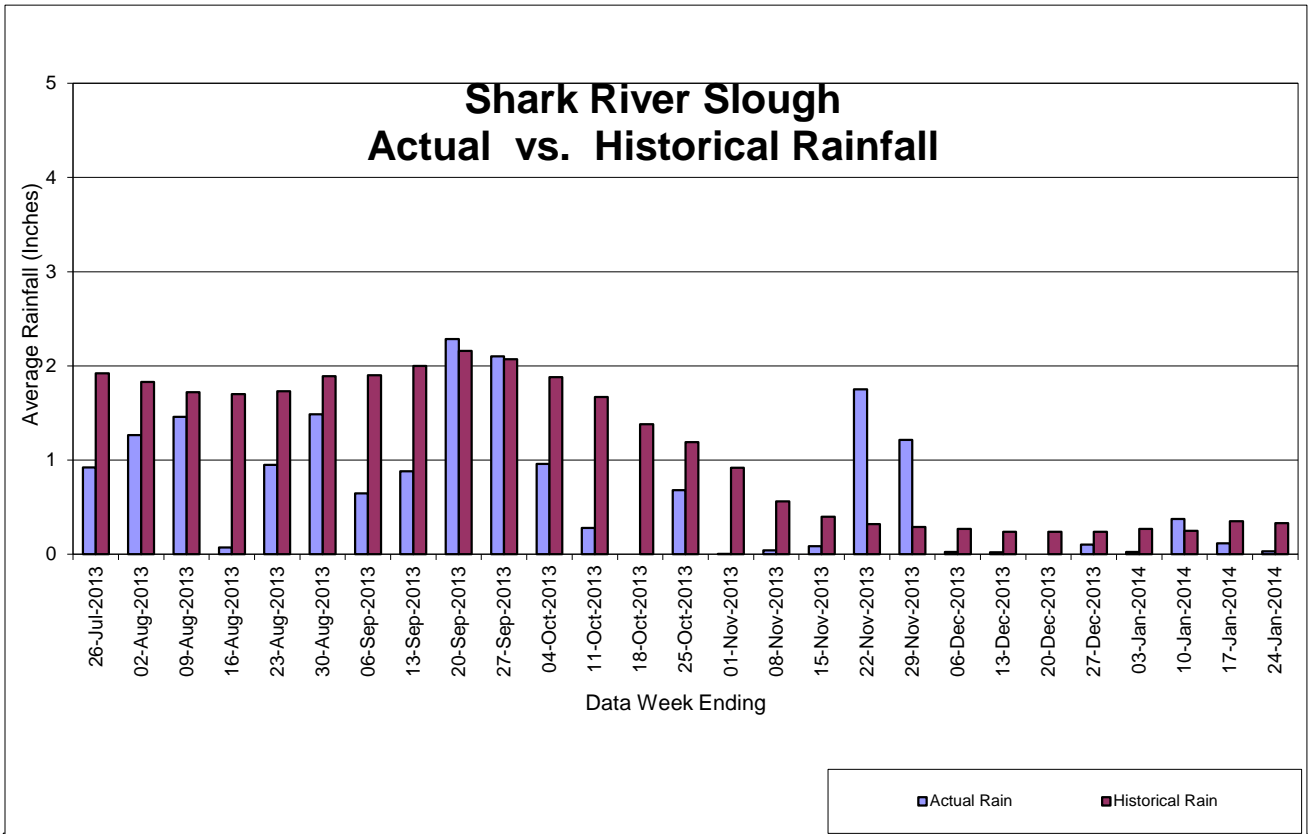
----- Statistical Parameters -----

Rainfall Formula Amount	-85 cfs
Last Week's Rainfall Formula	-85 cfs
Pre-Project Mean Discharge	0 cfs

Rainfall Excess Terms				
	RL1 -0.47	RL2 -0.62	RL3 1.84	

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow January 21, 2014 to January 27, 2014 5 cfs

S-12 Discharge 2 cfs  
 S-333 Discharge 3 cfs

----- Data Summary -----  
 January 10, 2014 to January 17, 2014  
 WCA-3A Stage (end of week) 9.90 ft. msl  
 Angel's 5.98 ft. msl  
 G3273 6.67 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.12	0.72
S-140		0.73
ENP		M

This Week's Avg	0.12	0.73
Pre-Project Avg	0.35	0.81

----- Transition Zone Information -----

**WCA-3A is in Zone E1**

Supplemental discharge is 5 cfs  
 Distance to Top of Zone E 0.00 feet  
 Distance to Bottom of Regulatory Zone 0.49 feet

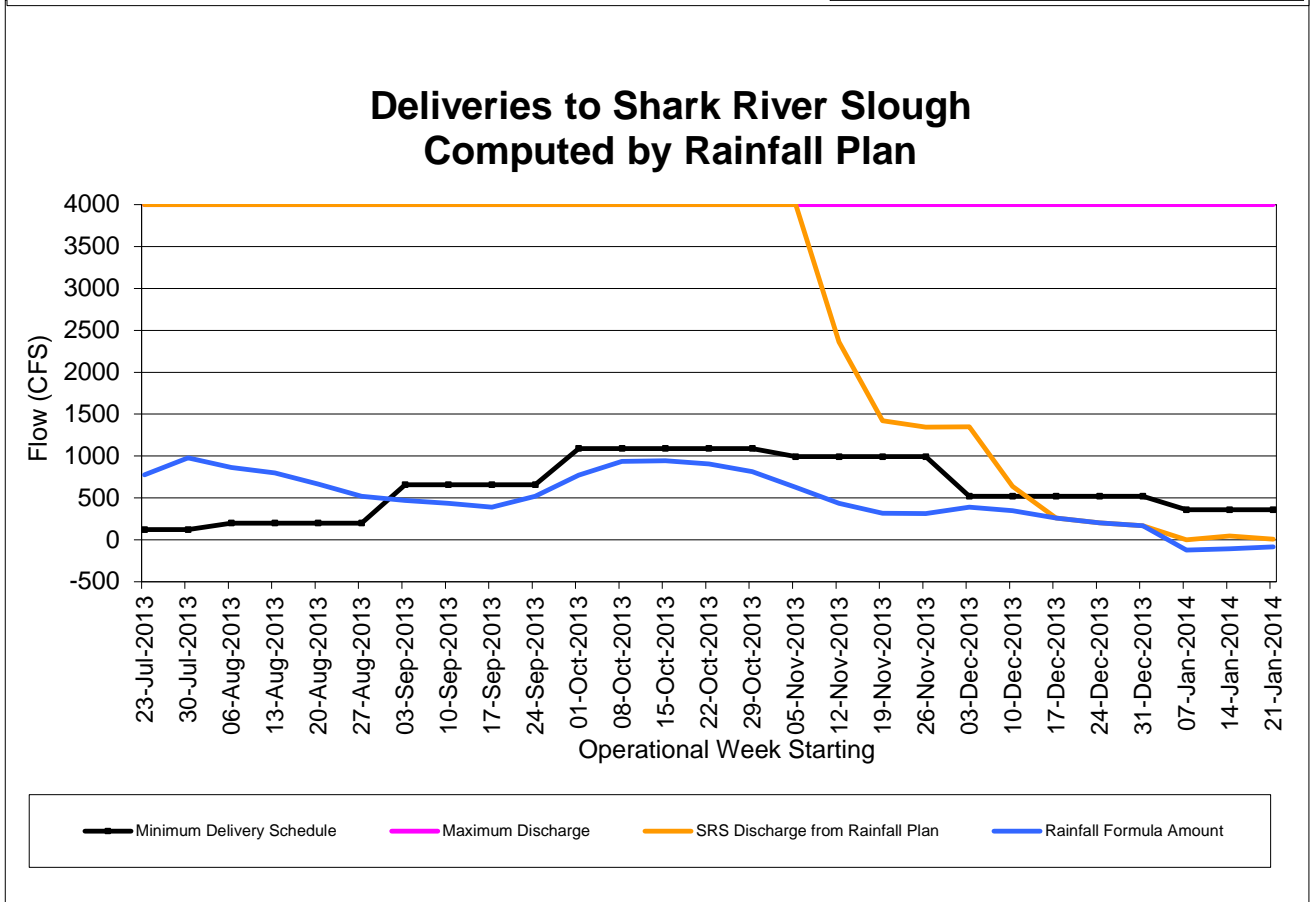
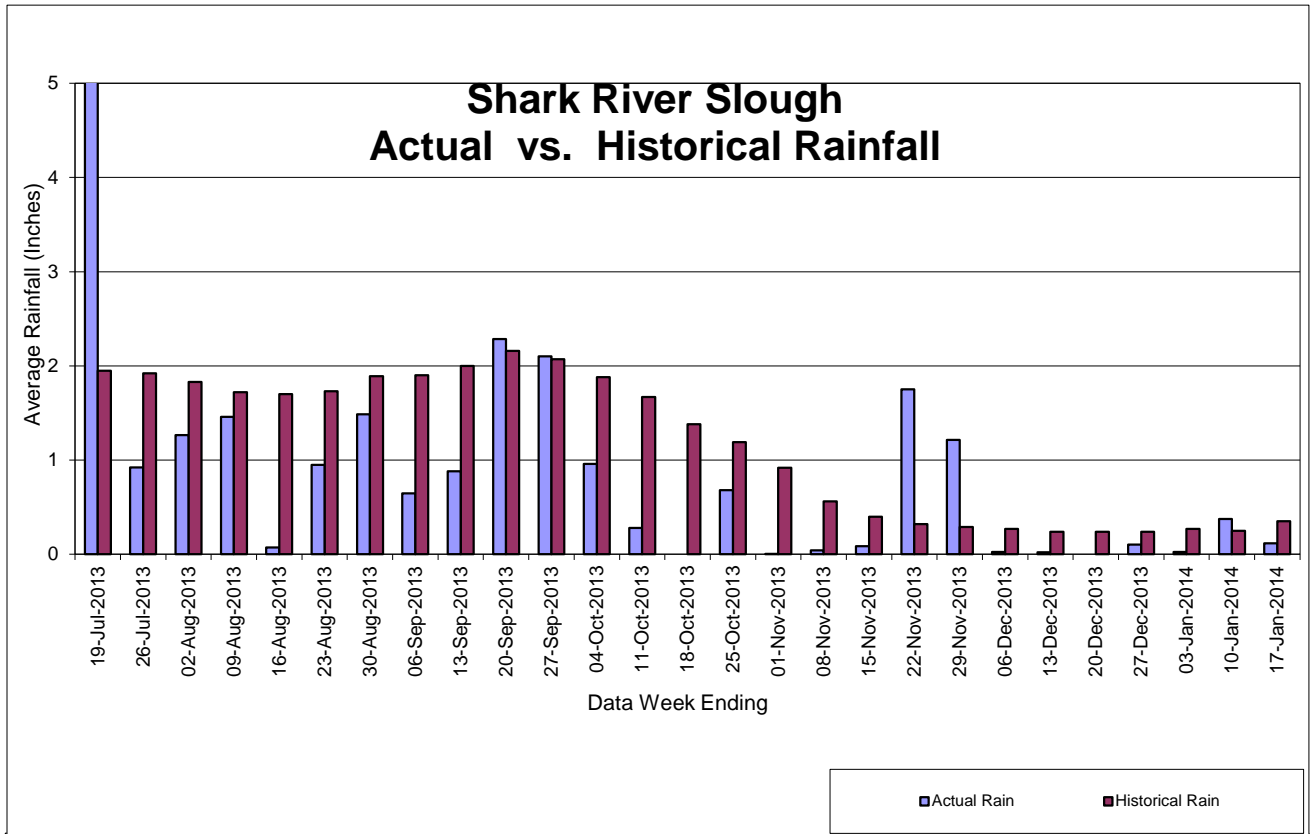
----- Statistical Parameters -----

Rainfall Formula Amount -85 cfs  
 Last Week's Rainfall Formula -106 cfs  
 Pre-Project Mean Discharge 0 cfs

Rainfall Excess Terms  
 RL1 -0.09 RL2 -0.95 RL3 1.77

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**



## WCA-3A RAINFALL-BASED MANAGEMENT PLAN

Target Flow January 14, 2014 to January 20, 2014 43 cfs

S-12 Discharge 20 cfs  
 S-333 Discharge 24 cfs

----- Data Summary -----  
 January 3, 2014 to January 10, 2014  
 WCA-3A Stage (end of week) 9.96 ft. msl  
 Angel's 6.18 ft. msl  
 G3273 6.80 ft. msl

<u>Station</u>	<u>Rainfall (in)</u>	<u>Pan Evaporation (in)</u>
NEXRAD Rain for WCA-3A and S7 evaporation	0.38	0.87
S-140		0.80
ENP		M

This Week's Avg	0.38	0.83
Pre-Project Avg	0.25	0.77

----- Transition Zone Information -----

**WCA-3A is in Zone E1**

Supplemental discharge is 43 cfs  
 Distance to Top of Zone E -0.02 feet  
 Distance to Bottom of Regulatory Zone 0.47 feet

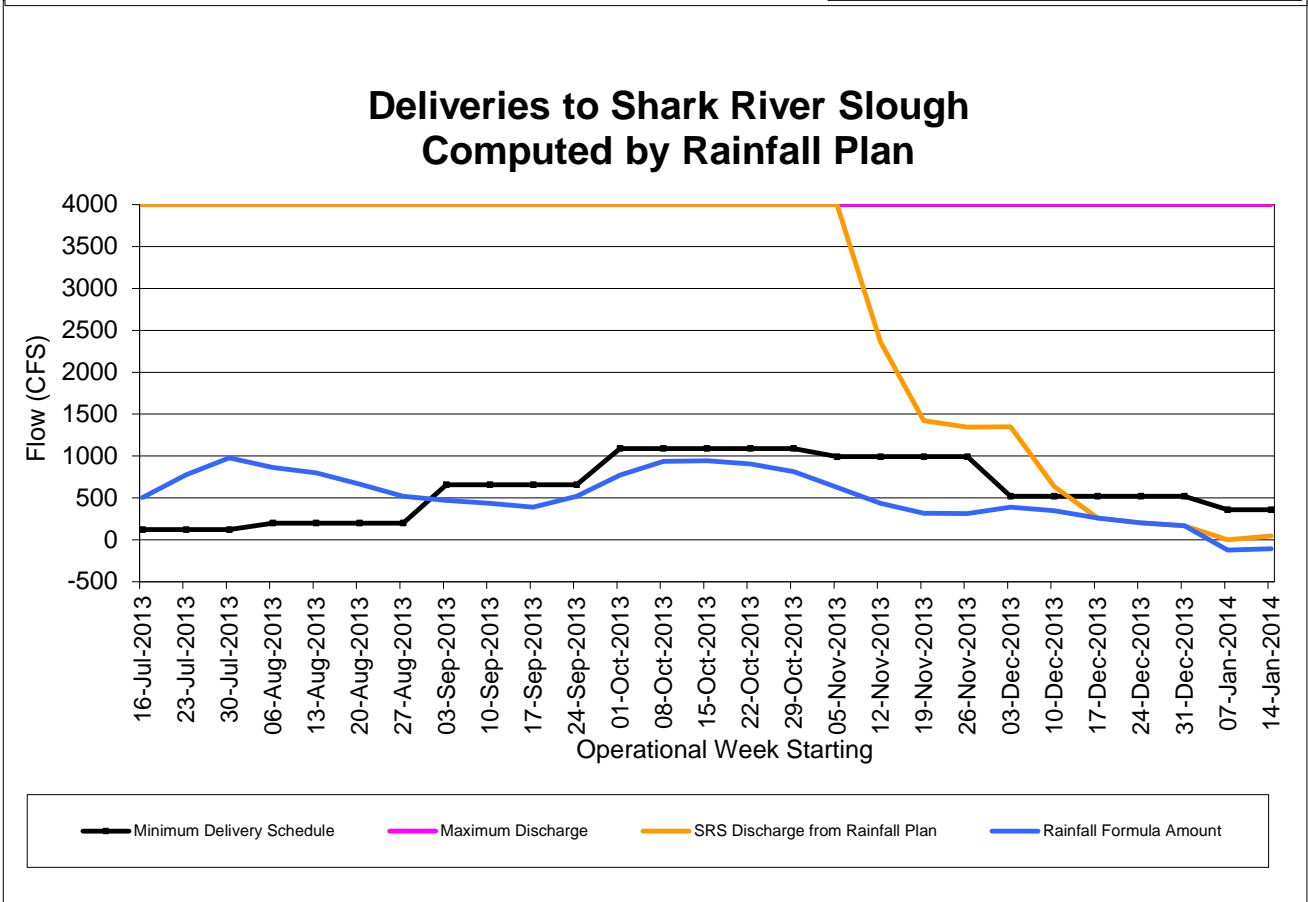
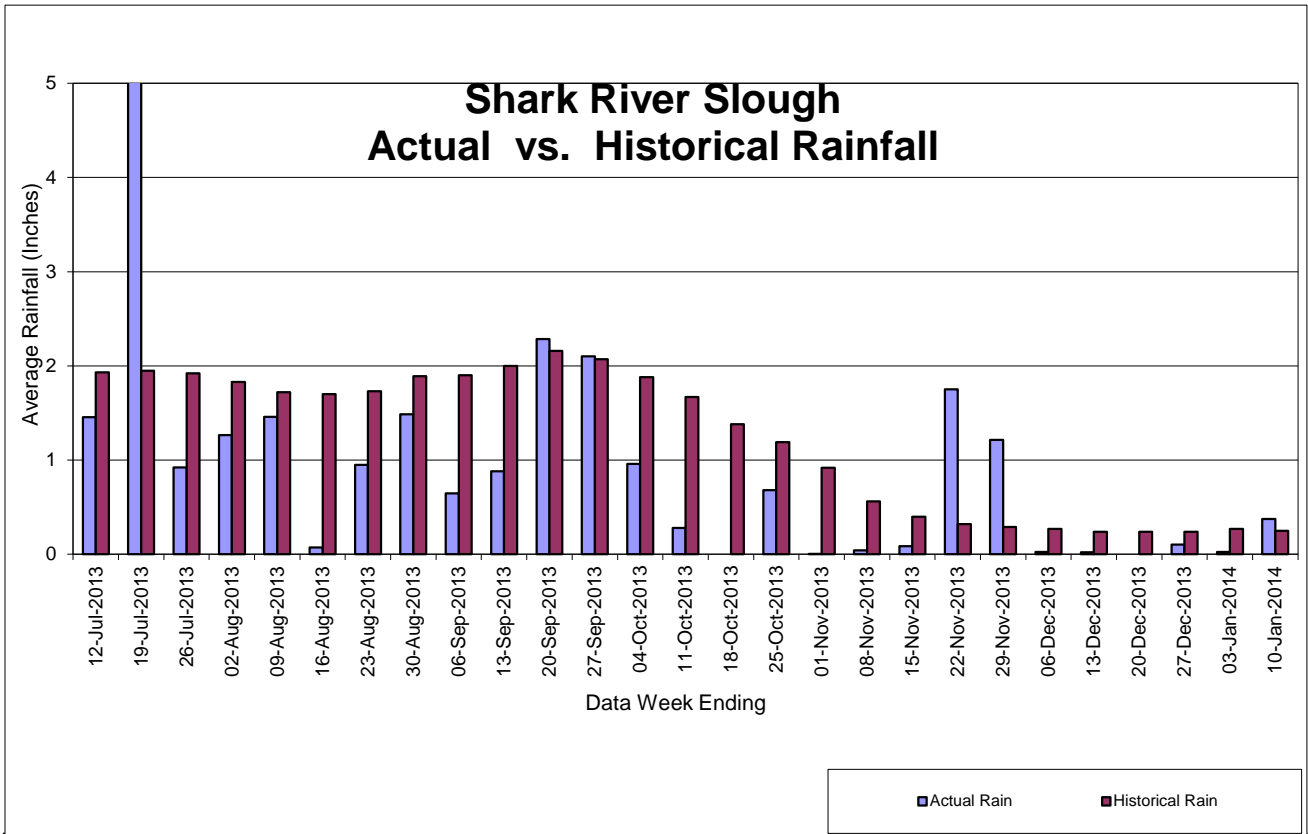
----- Statistical Parameters -----

Rainfall Formula Amount -106 cfs  
 Last Week's Rainfall Formula -123 cfs  
 Pre-Project Mean Discharge 0 cfs

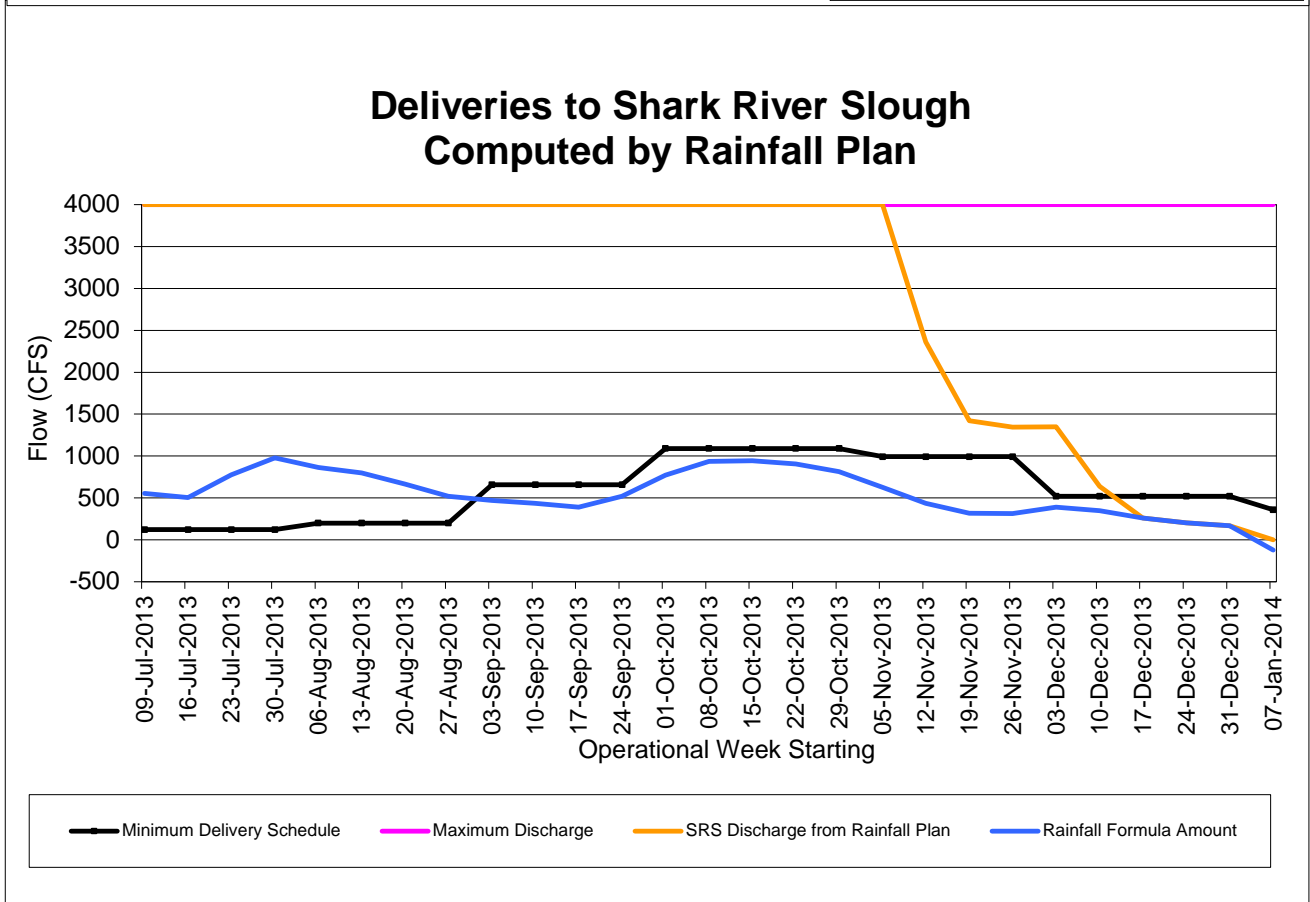
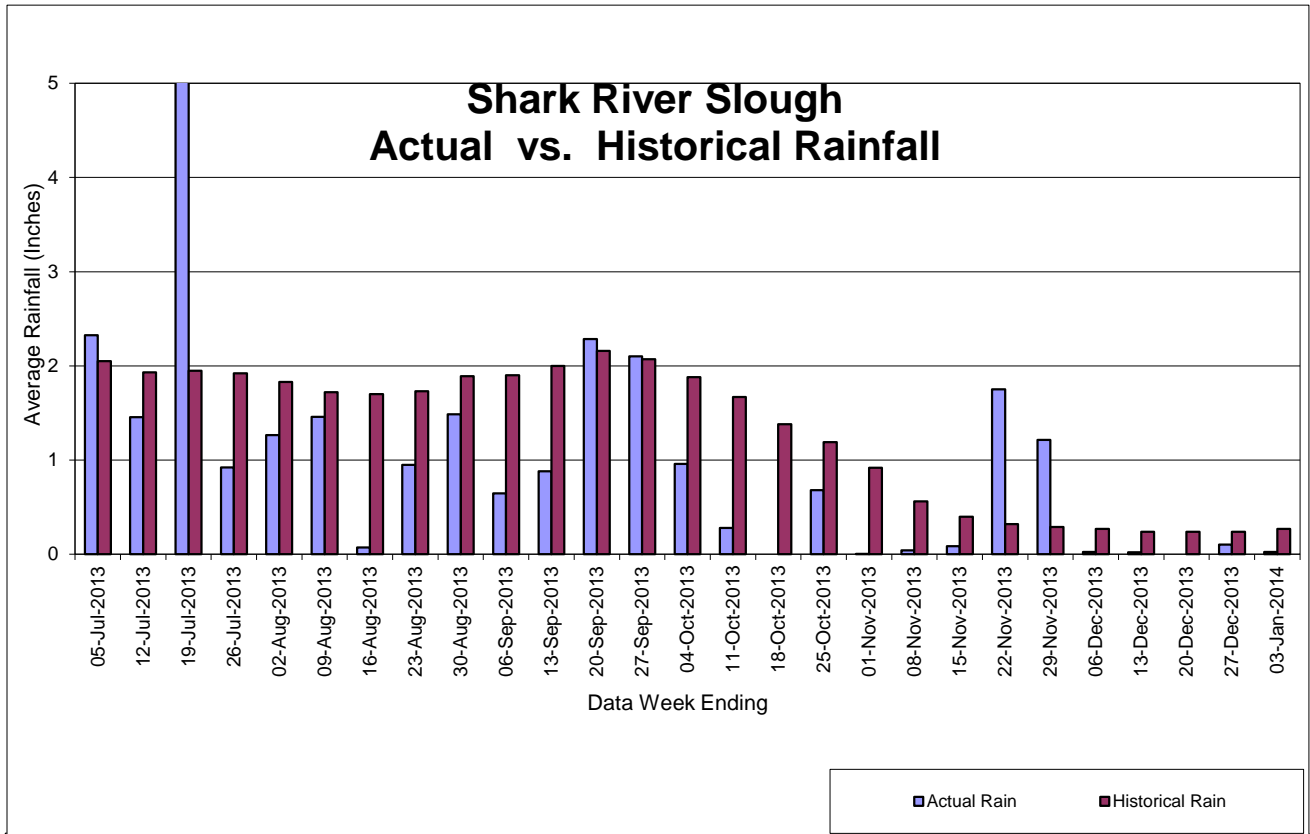
Rainfall Excess Terms  
 RL1 -0.15 RL2 -0.98 RL3 1.43

**COMMENT: S7 estimated evap data and S140 estimated evap data were used. ENP evap data were missing**

**\*NOTE: Actual discharges may vary from target discharges because of changing hydrologic conditions.**









# Weekly Target Flows for Shark River Slough Rainfall-Based Management Plan

## Identification and Correction of Error from January through November 2014

The purpose of this short report is to document an error found in the target flow calculations for Shark River Slough. This report includes a description of the error, the correction implemented, and a table and a figure to present the differences between the originally computed target flow, the corrected target flow, and the actual structure flows.

The Shark River Slough weekly report is a WCA-3A rainfall-based management plan that provides target flows for “next-week” operations of structures S-12 and S-333. The SRS report is produced each week by running a spreadsheet model. The spreadsheet model uses data (stage, rainfall, and evapotranspiration) representing conditions each week, ending on Friday. Target flows are an output of the spreadsheet model representing what releases from S-12 and S-333 should total for the following week. These target flows are a sum of regulatory and environmental based flow components. The regulatory component is calculated from the stage level of WCA3A each Friday and its position and zone on its operating schedule. The environmental component is calculated for the week ending on Friday from NEXRAD rainfall for WCA 3A, observed water levels at Angel and G-3273, and estimated ET from the S-7 and S-140 gauges.

During the calculation for the week ending November 21, 2014, an error was found in the spreadsheet. For all 2014 weekly calculations prior to November 21, 2014, the environmental component calculation was missing a link reference to a table in the spreadsheet model. This link reference was typically established at the beginning each calendar year, however, it was not established at the beginning of 2014. The resulting weekly target flows omitted weekly mean historical releases and therefore did not represent properly the sum of both regulatory and environmental based flow components as intended, but rather a sum of regulatory based flow component and an incomplete calculation of the environmental based flow component.

As a solution to address this yearly recurring issue (that would occur without a manual reset at the beginning of each new year), a VLOOKUP function was introduced in the spreadsheet model which resets the weekly means table values back to week 1 at the start of each year. The VLOOKUP was added prior to the report for the week ending November 21<sup>st</sup>. Target flow calculations on and subsequent to November 21 properly represent the sum of both the regulatory and environmental based flow components.

In order to assess the magnitude of the error, a set of tables and figures were prepared to present the differences between the originally calculated target flows and the corrected target flows, as well as to present the actual flows. Table 1 and Figure 1 below show a comparison of the target flows prior to (original) and after the addition of the VLOOKUP function (corrected), the difference between the original and corrected target flows and the actual structure flows (actual flow obtained from SFWMD’s DBHydro for S12 + S333 – S334. The dbkeys are 15807, 15042, and FB752; respectively. Missing data for

S333 and S334 was filled using dbkeys AJ018 and DJ186, respectively. Missing data for S12 was filled using interpolation. The data were extracted from Dbhydro on 12/12/2014.

Going forward the USACE will also independently perform the Shark River Slough rainfall plan calculations as an additional Quality Assurance and Quality Control step. The rainfall plan calculations by the USACE will be based on the same spreadsheet used by the SFWMD for the Shark River Slough rainfall plan calculations. Any discrepancy noticed between the SFWMD and USACE calculations, will be resolved over a conference call between the two agencies.

The Attachment provides additional details on the nature of the error and details of the correction that was added to the spreadsheet model used to calculate the SRS Rainfall Plan target flows. Table 1 and Figure 1 summarize weekly values for the original and corrected target, and the actual deliveries.

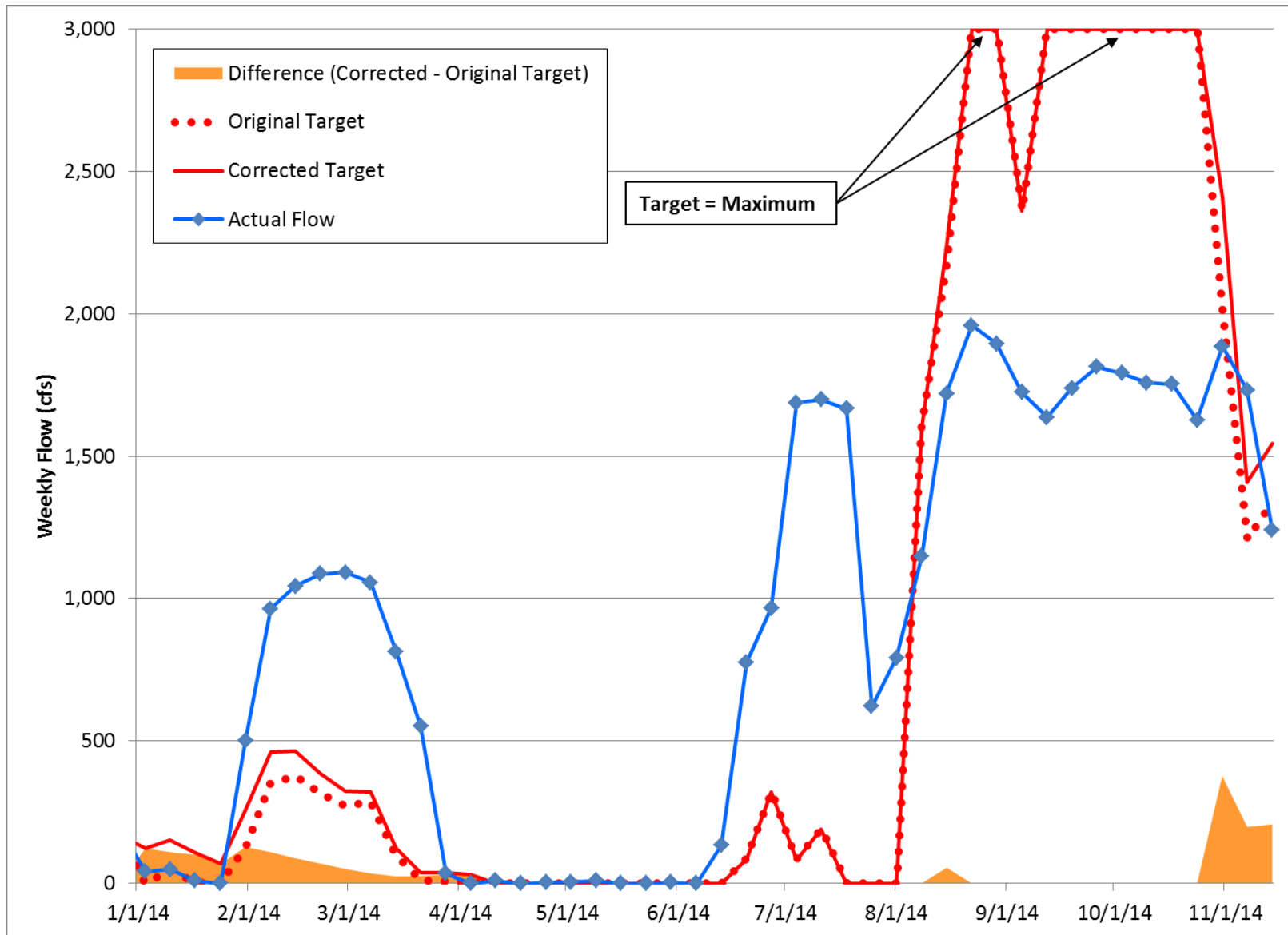
**Table 1.** Comparison of Original Target Flow, Corrected Target Flow, and Actual Flow

<b>Target Date<sup>1</sup></b>	<b>Original Target</b>	<b>Corrected Target</b>	<b>Difference in Target</b>	<b>Actual Flow<sup>2</sup></b>	<b>Actual Flow minus Corrected Target</b>
	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>
1/3/2014	0	123	123	40	-83
1/10/2014	43	153	110	50	-104
1/17/2014	5	106	101	10	-96
1/24/2014	0	68	68	0	-68
1/31/2014	128	256	128	501	244
2/7/2014	350	460	110	965	505
2/14/2014	378	466	88	1,044	578
2/21/2014	316	386	69	1,088	702
2/28/2014	273	323	50	1,091	768
3/7/2014	287	321	35	1,057	736
3/14/2014	99	124	25	815	691
3/21/2014	11	36	26	551	514
3/28/2014	7	38	31	34	-4
4/4/2014	0	29	29	0	-29
4/11/2014	0	0	0	10	10
4/18/2014	0	0	0	0	0
4/25/2014	0	0	0	3	3
5/2/2014	0	0	0	5	5
5/9/2014	0	0	0	9	9
5/16/2014	0	0	0	0	0
5/23/2014	0	0	0	0	0
5/30/2014	0	0	0	3	3
6/6/2014	0	0	0	0	0
6/13/2014	0	0	0	133	133

<b>Target Date<sup>1</sup></b>	<b>Original Target</b>	<b>Corrected Target</b>	<b>Difference in Target</b>	<b>Actual Flow<sup>2</sup></b>	<b>Actual Flow minus Corrected Target</b>
	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>
6/20/2014	85	85	0	776	690
6/27/2014	322	322	0	968	646
7/4/2014	83	83	0	1,687	1,604
7/11/2014	191	191	0	1,699	1,508
7/18/2014	0	0	0	1,666	1,666
7/25/2014	0	0	0	621	621
8/1/2014	0	0	0	792	792
8/8/2014	1,601	1,601	0	1,149	-452
8/15/2014	2,179	2,234	55	1,720	-513
8/22/2014	MAX	MAX	0	1,958	n/a
8/29/2014	MAX	MAX	0	1,895	n/a
9/5/2014	2,361	2,361	0	1,725	-637
9/12/2014	MAX	MAX	0	1,637	n/a
9/19/2014	MAX	MAX	0	1,739	n/a
9/26/2014	MAX	MAX	0	1,814	n/a
10/3/2014	MAX	MAX	0	1,792	n/a
10/10/2014	MAX	MAX	0	1,759	n/a
10/17/2014	MAX	MAX	0	1,753	n/a
10/24/2014	MAX	MAX	0	1,628	n/a
10/31/2014	2,032	2,409	377	1,886	-523
11/7/2014	1,209	1,408	198	1,732	324
11/14/2014	1,337	1,544	207	1,239	-305

<sup>1</sup> The Target Date is the ending date for the hydrologic data assembled for the model. The SRS weekly target report is issued on Monday. Operations for the new SRS flows are initiated on Tuesday.

<sup>2</sup> The Actual Flow is calculated as S12s + S333 - S334. It is the average flow for the week that starts on Tuesday following the target date.



**Figure 1.** Comparison of Original Target Flow, Corrected Target Flow, and Actual Flow

## Conclusions

Detailed information on the identification and resolution of the error, and more details on the calculation of the target are found in the Attachment.

1. The error was due to a weakness in the spreadsheet model that, at the start of each year, required manual set up of the cell references to the table of historical weekly mean flows. The references to the table are now automated via the VLOOKUP function and the manual set up is no longer required.
2. The corrected target values exceeded the original target values for the periods as follows:
  - a. Four weeks from 1/3/2014 to 1/24/2014. The differences ranged between 68 cfs and 123 cfs. WCA 3A was in Zone E1 for 1/10 and 1/17 and the regulatory component was only 43 cfs and 5 cfs, respectively.
  - b. Eight weeks from 1/31/2014 to 3/21/2014. The differences ranged between 25 cfs and 128 cfs. However, WCA 3A was in Zone E1 that calls for up to maximum releases per ERTF, and the actual deliveries exceeded the corrected target values by 373 cfs or more.
  - c. Two weeks on 3/28/2014 and 4/4/2014 by 31 cfs and 29 cfs, respectively. WCA 3A was in Zone E and there was no regulatory component.
  - d. The week ending on 8/15/2014 by 55 cfs. However, WCA 3A was in Zone D and the regulatory component exceeded the actual deliveries by 459 cfs.
  - e. Three weeks from 10/31/2014 to 11/14/2014. The differences ranged between 198 cfs to 377 cfs. The WCA 3A was in Zone D. The actual delivery was 146 cfs lower than the regulatory component for 10/31, it was 523 cfs higher on 11/7, and it was 98 cfs lower on 11/14.

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# Attachment

M682			
	A	M	T
1			
2			
3	Date	QMN	No.
669	10/04/13	995	40
670	10/11/13	1130	41
671	10/18/13	1229	42
672	10/25/13	1220	43
673	11/01/13	1084	44
674	11/08/13	937	45
675	11/15/13	820	46
676	11/22/13	689	47
677	11/29/13	566	48
678	12/06/13	462	49
679	12/13/13	376	50
680	12/20/13	321	51
681	12/27/13	281	52
682	01/03/14	0	1
683	01/10/14	0	2
684	01/17/14	0	3
685	01/24/14	0	4
686	01/31/14	0	5
687	02/07/14	0	6
688	02/14/14	0	7
689	02/21/14	0	8
690	02/28/14	0	9
691	03/07/14	0	10
692	03/14/14	0	11
693	03/21/14	0	12
694	03/28/14	0	13
695	04/04/14	0	14
696	04/11/14	0	15
697	04/18/14	0	16

B55				
	A	B	C	D
1	Weekly Means for Shark River Basin from 1941 thru 1952			
2	Week	Flow	Evaporation	Rain
3	1	246.60	0.75	0.27
4	2	216.20	0.77	0.25
5	3	185.80	0.81	0.35
35	33	199.20	1.39	1.70
36	34	223.40	1.40	1.73
37	35	256.50	1.36	1.89
38	36	310.30	1.34	1.90
39	37	384.60	1.31	2.00
40	38	540.10	1.27	2.16
41	39	778.90	1.25	2.07
42	40	994.90	1.21	1.88
43	41	1129.60	1.16	1.67
44	42	1229.00	1.12	1.38
45	43	1220.00	1.06	1.19
46	44	1084.40	1.02	0.92
47	45	936.50	0.97	0.56
48	46	819.80	0.91	0.40
49	47	688.80	0.87	0.32
50	48	566.20	0.82	0.29
51	49	462.30	0.80	0.27
52	50	376.40	0.78	0.24
53	51	320.80	0.76	0.24
54	52	281.30	0.75	0.24
55			63.93	55.68
56				
57				
58				

**Table A1.** Identification of Error

Beginning on January 3, 2014, the value for the weekly mean flow (QMN) in the CurrentWk tab (left side of figure) referenced values beyond the cell range of the 52 weekly mean flows in the QRFEV tab (right side of figure). The cell references in the QMN column were not manually set for 2014 to the corresponding flow weekly means.

M682				=VLOOKUP(T682,QRFEV!A3:B54,2)			
	A	M	T	U	V	W	
1							
2							
3	Date	QMN	No.				
669	10/04/13	995	40				
670	10/11/13	1130	41				
671	10/18/13	1229	42				
672	10/25/13	1220	43				
673	11/01/13	1084	44				
674	11/08/13	937	45				
675	11/15/13	820	46				
676	11/22/13	689	47				
677	11/29/13	566	48				
678	12/06/13	462	49				
679	12/13/13	376	50				
680	12/20/13	321	51				
681	12/27/13	281	52				
682	01/03/14	247	1				
683	01/10/14	216	2				
684	01/17/14	186	3				
685	01/24/14	153	4				
686	01/31/14	130	5				
687	02/07/14	110	6				
688	02/14/14	88	7				
689	02/21/14	69	8				
690	02/28/14	50	9				
691	03/07/14	35	10				
692	03/14/14	25	11				
693	03/21/14	26	12				
694	03/28/14	31	13				
695	04/04/14	32	14				
696	04/11/14	31	15				
697	04/18/14	29	16				

B3						246.6					
	A	B	C	D	E	F					
1	Weekly Means for Shark River Basin from 1941 thru 1952										
2	Week	Flow	Evaporation	Rain							
3	1	246.60	0.75	0.27							
4	2	216.20	0.77	0.25							
5	3	185.80	0.81	0.35							
35	33	199.20	1.39	1.70							
36	34	223.40	1.40	1.73							
37	35	256.50	1.36	1.89							
38	36	310.30	1.34	1.90							
39	37	384.60	1.31	2.00							
40	38	540.10	1.27	2.16							
41	39	778.90	1.25	2.07							
42	40	994.90	1.21	1.88							
43	41	1129.60	1.16	1.67							
44	42	1229.00	1.12	1.38							
45	43	1220.00	1.06	1.19							
46	44	1084.40	1.02	0.92							
47	45	936.50	0.97	0.56							
48	46	819.80	0.91	0.40							
49	47	688.80	0.87	0.32							
50	48	566.20	0.82	0.29							
51	49	462.30	0.80	0.27							
52	50	376.40	0.78	0.24							
53	51	320.80	0.76	0.24							
54	52	281.30	0.75	0.24							
55			63.93	55.68							
56											
57											
58											

**Table A2.** Correction of Error

To correct the error and to eliminate the need to manually set the cell references at the beginning of each year that the model data is extended, the VLOOKUP function is now used to automatically reference the corresponding weekly mean flow. Please note that some rows in the QRFEV tab displayed on the right are hidden for ease of presentation in this documentation.



**Table A3.** Extended Comparison of Original Target, Corrected Target, their Components, and Actual Flow

Target Date <sup>1</sup>	WCA 3A stage	Zone, Bottom of Zone if Applicable <sup>2</sup>	Original Target Flow			Corrected Target Flow			Corrected Minus Original Target	Actual Flow <sup>4</sup>
			Rainfall Response Component	WCA 3A Regulatory Component <sup>3</sup>	Target	Rainfall Response Component	WCA 3A Regulatory Component <sup>3</sup>	Target		
	<i>ft</i>	<i>ft</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	
11/1/2013	10.57	A	627	MAX	MAX	627	MAX	MAX	0	1,719
11/8/2013	10.43	D: 10.04	435	1,928	2,362	435	1,928	2,362	0	1,613
11/15/2013	10.31	D: 10.09	316	1,105	1,421	316	1,105	1,421	0	1,512
11/22/2013	10.34	D: 10.13	311	1,033	1,344	311	1,033	1,344	0	1,378
11/29/2013	10.37	D: 10.18	390	960	1,350	390	960	1,350	0	1,267
12/6/2013	10.28	D: 10.22	348	288	636	348	288	636	0	700
12/13/2013	10.16	E	259	0	259	259	0	259	0	303
12/20/2013	10.10	E	203	0	203	203	0	203	0	186
12/27/2013	10.05	E	168	0	168	168	0	168	0	193
1/3/2014	9.98	E	0	0	0	123	0	123	123	40
1/10/2014	9.96	E1: 9.94	0	43	43	110	43	153	110	50
1/17/2014	9.90	E1: 9.90	0	5	5	101	5	106	101	10
1/24/2014	9.82	E	0	0	0	68	0	68	68	0
1/31/2014	9.86	E1: 9.81	0	128	128	128	128	256	128	501
2/7/2014	9.86	E1: 9.76	110	240	350	220	240	460	110	965
2/14/2014	9.82	E1: 9.72	126	252	378	214	252	466	88	1,044
2/21/2014	9.76	E1: 9.67	103	213	316	172	213	386	69	1,088
2/28/2014	9.71	E1: 9.63	73	200	273	123	200	323	50	1,091
3/7/2014	9.67	E1: 9.59	75	211	287	110	211	321	35	1,057
3/14/2014	9.56	E1: 9.54	51	48	99	76	48	124	25	815
3/21/2014	9.48	E	11	0	11	36	0	36	26	551
3/28/2014	9.38	E	7	0	7	38	0	38	31	34
4/4/2014	9.29	E	0	0	0	29	0	29	29	0
4/11/2014	9.18	E	0	0	0	0	0	0	0	10

Target Date <sup>1</sup>	WCA 3A stage	Zone, Bottom of Zone if Applicable <sup>2</sup>	Original Target Flow			Corrected Target Flow			Corrected Minus Original Target	Actual Flow <sup>4</sup>
			Rainfall Response Component	WCA 3A Regulatory Component <sup>3</sup>	Target	Rainfall Response Component	WCA 3A Regulatory Component <sup>3</sup>	Target		
	<i>ft</i>	<i>ft</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	
4/18/2014	9.19	E	0	0	0	0	0	0	0	0
4/25/2014	9.09	E	0	0	0	0	0	0	0	3
5/2/2014	8.97	E	0	0	0	0	0	0	0	5
5/9/2014	8.82	E	0	0	0	0	0	0	0	9
5/16/2014	8.87	E	0	0	0	0	0	0	0	0
5/23/2014	8.70	E	0	0	0	0	0	0	0	0
5/30/2014	8.62	E	0	0	0	0	0	0	0	3
6/6/2014	8.63	E	0	0	0	0	0	0	0	0
6/13/2014	8.95	E	0	0	0	0	0	0	0	133
6/20/2014	8.95	E1: 8.92	0	85	85	0	85	85	0	776
6/27/2014	9.00	E1: 8.87	0	322	322	0	322	322	0	968
7/4/2014	9.28	D: 8.83	0	83	83	0	83	83	0	1,687
7/11/2014	9.32	D: 8.78	0	191	191	0	191	191	0	1,699
7/18/2014	9.30	E	0	0	0	0	0	0	0	1,666
7/25/2014	9.30	E	0	0	0	0	0	0	0	621
8/1/2014	9.39	E	0	0	0	0	0	0	0	792
8/8/2014	9.78	D: 9.46	0	1,601	1,601	0	1,601	1,601	0	1,149
8/15/2014	9.94	D: 9.46	0	2,179	2,179	55	2,179	2,234	55	1,720
8/22/2014	10.06	A	0	MAX	MAX	13	MAX	MAX	0	1,958
8/29/2014	10.10	A	0	MAX	MAX	0	MAX	MAX	0	1,895
9/5/2014	10.11	D: 9.64	0	2,361	2,361	0	2,361	2,361	0	1,725
9/12/2014	10.34	A	0	MAX	MAX	161	MAX	MAX	0	1,637
9/19/2014	10.47	A	0	MAX	MAX	405	MAX	MAX	0	1,739
9/26/2014	10.55	A	0	MAX	MAX	567	MAX	MAX	0	1,814
10/3/2014	10.62	A	0	MAX	MAX	689	MAX	MAX	0	1,792
10/10/2014	10.61	A	0	MAX	MAX	698	MAX	MAX	0	1,759

Target Date <sup>1</sup>	WCA 3A stage	Zone, Bottom of Zone if Applicable <sup>2</sup>	Original Target Flow			Corrected Target Flow			Corrected Minus Original Target	Actual Flow <sup>4</sup>
			Rainfall Response Component	WCA 3A Regulatory Component <sup>3</sup>	Target	Rainfall Response Component	WCA 3A Regulatory Component <sup>3</sup>	Target		
	<i>ft</i>	<i>ft</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	<i>cfs</i>	
10/17/2014	10.57	A	0	MAX	MAX	669	MAX	MAX	0	1,753
10/24/2014	10.51	A	0	MAX	MAX	568	MAX	MAX	0	1,628
10/31/2014	10.40	D: 9.99	0	2,032	2,032	377	2,032	2,409	377	1,886
11/7/2014	10.28	D: 10.04	0	1,209	1,209	198	1,209	1,408	198	1,732
11/14/2014	10.35	D: 10.08	0	1,337	1,337	207	1,337	1,544	207	1,239

<sup>1</sup> The hydrologic data assembled for the model is for the week ending on the Target Date (Friday). The SRS target weekly report is issued on Monday after the Target Date. The new SRS flows are initiated on Tuesday.

<sup>2</sup> The bottom of the zone is shown with two decimal places for ease of comparison with the WCA 3A stage. However, this approximation will cause a rounding error that will not yield the exact regulatory component shown in the table. The spreadsheet model uses at least four decimal places for the bottom of the zone to calculate the regulatory component that is shown in the table.

<sup>3</sup> The regulatory component is calculated as follows:

For Zone A = maximum per ERTTP schedule

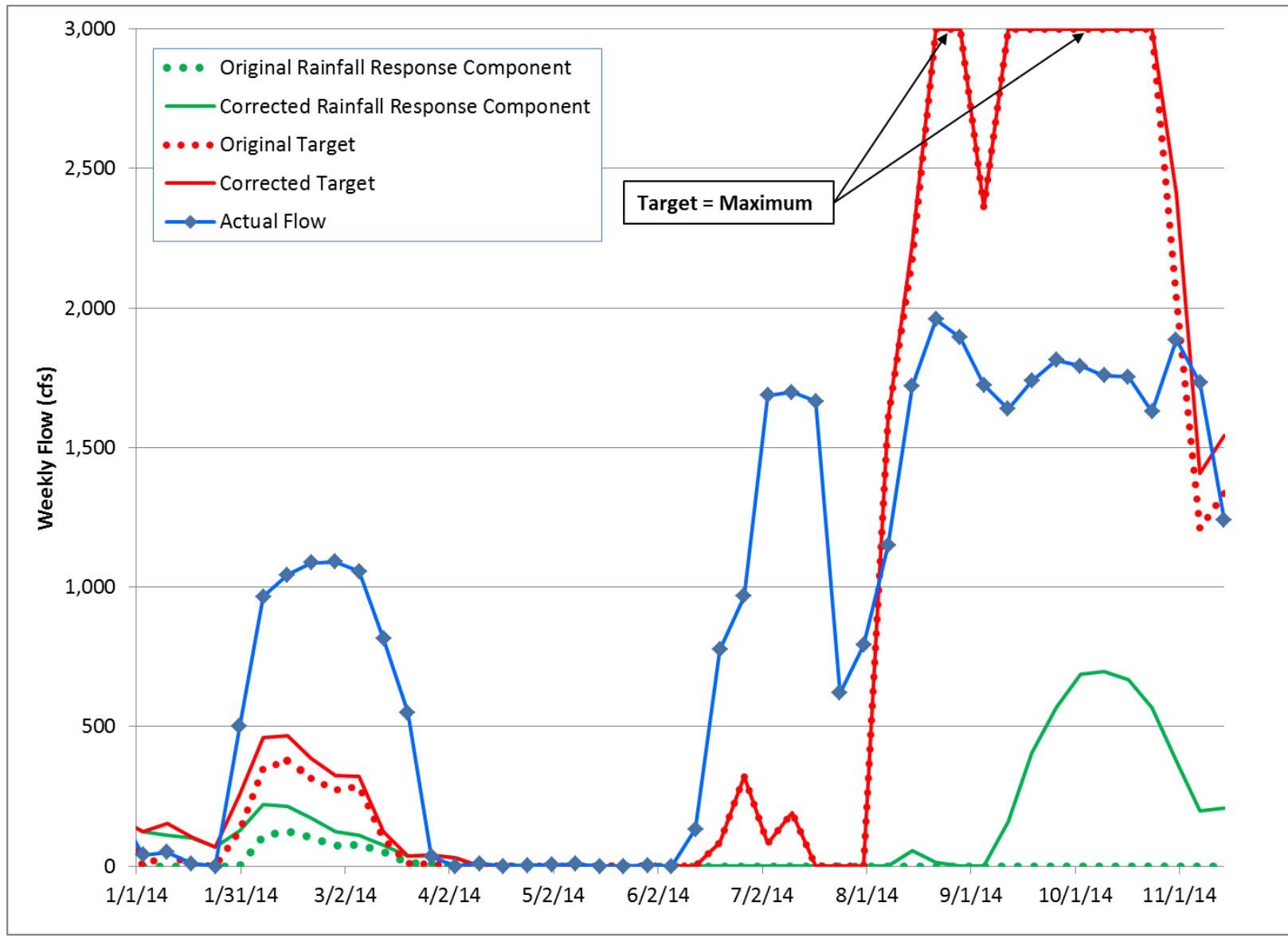
For Zone D/E1, from January 1 through June 30 =  $2,500 \times (\text{WCA 3A stage} - \text{bottom of Zone D/E1})$

For Zone D/E1, from July 1 through December 31 =  $5,000 \times (\text{WCA 3A stage} - \text{bottom of Zone D/E1})$

For Zone E = zero

To obtain the exact value of the regulatory component shown in the table, the value for the bottom of the zone must include at least four decimal places, which is how it is calculated in the spreadsheet model..

<sup>4</sup> The Actual Flow is calculated as S12s + S333 - S334. It is the average flow for the week that starts on Tuesday following the target date.



**Figure A1.** Extended Comparison of Rain-Driven Flow, Target Flow, and Actual Flow