

ODFW AQUATIC INVENTORY PROJECT
OREGON PLAN FOR SALMON & WATERSHEDS
STREAM RESTORATION HABITAT REPORT

STREAM: Feagles Creek (MC-31)
BASIN: Yaquina River
SURVEY TYPE: Post-Tx
DATE: July 1, 2003
SURVEY CREW: Jeff Snyder, James Andrews
REPORT PREPARED BY: Paul Jacobsen
BASIN AREA: 21.0 km²
USGS MAPS: Harlan
ECOREGION: Coast Range Sedimentary

GENERAL DESCRIPTION:

The Feagles Creek habitat survey extended 472 meters. The channel was constrained by terraces in a broad valley floor. The average valley width index was 3.8 (range: 1.4-5.0). Land use for the reach was second growth (15-30 cm dbh) trees. The average unit gradient was 2.7 percent. Riffles (52%) and scour pools (31%) dominated stream habitat. Gravel (43%) and cobble (31%) dominated stream substrate. Wood volume was very high at 48.9 m³/100m.

COMMENTS:

There were no potential barriers to upstream fish migration in the surveyed length.

The crew noted several habitat structures during the survey.

REACH 1

T12S-R08W-S30SE

REACH 1

Valley and Channel Summary

Valley Characteristics (Percent Reach Length)

<u>Narrow Valley Floor</u>		<u>Broad Valley Floor</u>	
Steep V-shape	0%	Constraining Terraces	0%
Moderate V-shape	0%	Multiple Terraces	100%
Open V-shape	0%	Wide Floodplain	0%
Valley Width Index	3.8	VWI Range:	1.4 - 5

Channel Morphology (Percent Reach Length)

<u>Constrained</u>		<u>Unconstrained</u>	
Hillslope	0%	Single Channel	0%
Bedrock	0%	Multiple Channel	0%
Terrace	100%	Braided Channel	0%
Alt. Terrace/Hill	0%		
Landuse	0%		

Channel Characteristics

<u>Type</u>	<u>Length (m)</u>	<u>Area (m2)</u>	<u>Dry Units</u>
Primary	472	2,004	0
Secondary	106	256	1

Channel Dimensions (m)

<u>Wetted</u>		<u>Active</u>		<u>Floodprone</u>	<u>First Terrace</u>
Width	3.8	Width	8.3	10.1	11.8
Depth	0.34	Height	0.4	0.9	1.0
		W:D ratio	19.0	Entrenchment	1.2

Stream Flow Type: LF Water temp (C): 14.0 - 14.0
Avg. Unit Gradient: 2.7% Habitat Units/100m: 9.0

Riparian, Bank, and Wood Summary

	<u>Primary</u>	<u>Secondary</u>
Land Use:	ST	
Riparian Vegetation:	G	D30

Bank Condition and Shade

<u>Bank Status</u>	<u>Percent Reach Length</u>	<u>Shade (% of 180)</u>
Actively Eroding:	3%	Reach avg: 71%
Undercut Banks:	8%	Range: 32 - 100

Large Wood Debris

	<u>Total</u>	<u>Total / 100m</u>
All pieces (>=3m x 0.15m):	156	33.1
Volume (m ³):	231	48.9
Key pieces (>=10m x 0.60m):	24	5.1

OREGON DEPARTMENT OF FISH AND WILDLIFE

FEAGLES CREEK POST-TX (MC-31)

HABITAT INVENTORY

Report Date: 12/17/03

Survey Date:

7/1/03

REACH 1

T12S-R08W-S30SE

REACH 1

HABITAT DETAIL

Habitat Type	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Large Boulders (#>0.5m)	Substrate Percent Wetted Area						
							S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
POOL-ALCOVE	1	9	2.1	0.30	18	0	40	60	0	0	0	0	
POOL-BACKWATER	6	53	3.1	0.45	173	0	3	61	26	10	0	0	
POOL-LATERAL SCOUR	14	143	4.4	0.60	711	6	6	22	41	16	1	14	
PUDDLED UNIT	1	14	0.3	0.05	4	0	0	10	90	0	0	0	
RAPID/BOULDERS	1	25	0.3	0.25	8	2	0	0	80	20	0	0	
RIFFLE	17	268	3.9	0.23	1,050	23	0	13	48	38	1	0	
RIFFLE W/ POCKETS	1	23	5.0	0.15	116	2	0	0	20	80	0	0	
STEP/BEDROCK	1	1	1.5	0.10	2	0	10	0	90	0	0	0	
STEP/BOULDERS	1	3	2.0	0.10	6	12	0	0	0	80	20	0	
STEP/COBBLE	8	38	4.5	0.17	166	1	0	0	48	52	0	0	
STEP/LOG	1	1	6.1	0.20	7	0	0	0	30	70	0	0	
Total:	52	578	3.8	0.34	2,259	46	Avg	3	19	43	31	1	4

HABITAT SUMMARY

Habitat Group	Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Wetted Area		Large Boulders	
					(m ²)	Percent	Number	(# / 100m ²)
Dammed & BW Pools	7	61	3.0	0.43	191	8.45%	0	0.0
Scour Pools	14	143	4.4	0.60	711	31.45%	6	0.8
Glides	0	0			0	0.00%	0	0.0
Riffles	18	291	4.0	0.22	1,166	51.62%	25	2.1
Rapids	1	25	0.3	0.25	8	0.33%	2	26.7
Cascades	0	0			0	0.00%	0	0.0
Step/Falls	11	43	4.1	0.16	180	7.97%	13	7.2
Dry	1	14	0.3	0.05	4	0.18%	0	0.0
Culverts	0	0			0	0.00%	0	0.0

POOL SUMMARY

	<u>Total</u>	<u># / Km</u>
All Pools:	21	36.3
Pools >=1m deep:	1	1.7
Complex pools (LWD pieces>=3):	10	17.3
Pool frequency (channel widths/pool):	3.3	
Residual pool depth (avg):	0.49	

STREAM SUMMARY

FEAGLES CREEK POST-TX (MC-31)

Number Units	Total Length (m)	Avg Width (m)	Avg Depth (m)	Total Area (m ²)	Substrate Percent Wetted Area						Large Boulders (>0.5m)
					S/O	Snd	Grvl	Cbl	Bldr	Bdrk	
52	578	3.8	0.34	2,259	3	19	43	31	1	4	46

Habitat Group	Wetted Area	
	(m ²)	Percent
Dammed & BW Pools	191	8.45%
Scour Pools	711	31.45%
Glides	0	0.00%
Riffles	1,166	51.62%
Rapids	8	0.33%
Cascades	0	0.00%
Step/Falls	180	7.97%
Dry	4	0.18%
Culverts	0	0.00%

RIPARIAN ZONE VEGETATION SUMMARY

REACH 1 **REACH 1**

Summary of Riparian Zone (0-30m) 3 transects

Total hardwoods/1000	366
Total conifers/1000 ft	102
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-meter wide band

Diameter class (cm)	Zone 1		Zone 2		Zone 3		Zones 1-3	
	0-10 meters		10 - 20 meters		20 - 30 meters		0-30 meters	
	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood	Conifer	Hardwood
3-15cm	0.0	1.0	0.0	1.3	0.3	0.3	0.3	2.7
15-30cm	0.0	0.7	0.0	0.7	1.0	1.3	1.0	2.7
30-50cm	0.0	0.0	0.3	0.3	0.0	0.0	0.3	0.3
50-90cm	0.0	0.0	0.0	0.3	0.0	0.0	0.0	0.3
>90cm	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total/100m2	0.0	1.7	0.3	2.7	1.3	1.7	0.6	2.0

Canopy closure and ground cover

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Canopy closure	60		79		73	
Shrub cover	13		33		22	
Grass/forb cover	78		56		66	

Predominant landform in each zone

	Zone 1		Zone 2		Zone 3	
	0-10 meters		10 - 20 meters		20 - 30 meters	
	(%)		(%)		(%)	
Hillslope	67		33		17	
High terrace	33		33		17	
Low terrace	0		0		0	
Floodplain	0		0		0	
Wetland/meadow	0		0		0	
Stream channel	0		0		0	
Roadbed/Railroad	0		33		67	
Riprap	0		0		0	
Surface slope (%)	26		14		12	

Summary of Riparian Zone (0-30m) for all reaches

3 transects

Summary of riparian zone (0-100 feet) extrapolated to 1,000 feet along stream

Total hardwoods/1000	366
Total conifers/1000 ft	102
Total conifers >20" dbh/1000 ft	0
Total conifers >35" dbh/1000 ft	0

Average number of trees in a 5-m wide band

Diameter class (cm)	Zones 1-3 <u>0-30 meters</u>	
	<u>Conifer</u>	<u>Hardwood</u>
3-15cm	0.3	2.7
15-30cm	1.0	2.7
30-50cm	0.3	0.3
50-90cm	0.0	0.3
>90cm	0.0	0.0

RIPARIAN ZONE VEGETATION

Reach 1

Reach 1

Unit	Side	Zone	Surface	Slope	Cover (percent)			Diameter class (cm)					Notes		
					Canopy	Shrub	Grass	3-15	15-30	30-50	50-90	>90			
13	RT	3	RB	6	50	5	60	Conifer							35% BARE GROUND, DIRT
								Hardwood							
13	LF	1	HS	35		20	80	Conifer							
								Hardwood							
13	RT	2	HT	16	80	70	20	Conifer							20 % BARE
								Hardwood				1			
13	RT	1	HT	13	10	5	95	Conifer							
								Hardwood							
13	LF	3	HS	40	85	70	30	Conifer							
								Hardwood		4					
13	LF	2	HS	35	85	80	20	Conifer							SALMON BERRY
								Hardwood	1	2	1				
25	LF	1	HS	34	90	5	95	Conifer							
								Hardwood		1					
25	RT	3	RB	3	70	20	70	Conifer							10% BARE
								Hardwood	1						
25	RT	2	RB	3	60	5	95	Conifer							
								Hardwood	2						
25	LF	2	HS	27	90	20	80	Conifer				1			
								Hardwood	1						
25	LF	3	RB	15	80	5	95	Conifer	1	3					
								Hardwood							
25	RT	1	HS	45	80	40	60	Conifer							
								Hardwood	3	1					
40	LF	2	RB	4		10	30	Conifer							60% BARE
								Hardwood							
40	LF	3	RB	9		20	50	Conifer							30% BARE
								Hardwood							
40	RT	1	HT	0.5		5	95	Conifer							
								Hardwood							
40	RT	2	HT	1		10	90	Conifer							
								Hardwood							
40	RT	3	HT	1	80	10	90	Conifer							YOUNG STAND OF ALDFRS
								Hardwood							
40	LF	1	HS	27		5	40	Conifer							55% BARE
								Hardwood							

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: **2-MC** SITE ID: **31** **FEAGLES CREEK POST-TX (MC-31)**

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
1	LP	00	0.14		COHO PRESENT	FISH PRESENT
4	LP	00	21.74		FISH PRESENT	FISH PRESENT
5	SL	00	22.84		H=.25	
6	RI	01	41.84		/BW SCULPIN TO COHO	FISH PRESENT
7	BW	10	41.84		/BW LOTS OF COHOW TO	COHO, TEMP=12 DEG C
8	LP	00	54.34		COHO PRESENT	
9	LP	00	63.04		FISH	COHO PRESENT
11	LP	00	77.54	WL	COHO & CADDIS LARVAE	COHO, CADDIS FLY LARVAE
12	RI	00	102.54		FISH (SALMONIDS BUT N	
13	RP	00	125.74		WL (BIRDS), COHO PRES	COHO, CADDIS FLY LARVAE
16	LP	01	150.44		COHO, WL (BIRDS)	COHO PRESENT
17	SC	01	156.34	DJ		COHO PRESENT
18	LP	01	160.44		DJ, COHO	
19	LP	02	160.44		FISH	COHO PRESENT
20	BW	10	160.44		COHO	COHO PRESENT
21	PD	02	160.44		COHO	COHO PRESENT
22	BW	10	160.44	SS	SS/ , COHO	COHO PRESENT
23	RI	00	180.14		COHO	COHO
24	LP	00	197.14	DJ	DJ, COHO & TROUT	STEELHEAD, COHO
25	RI	00	210.74		14/9.6=VWI	
26	LP	01	226.74	HS	HS, COHO	

Comment Summary

Oregon Plan Monitoring Sites 2003

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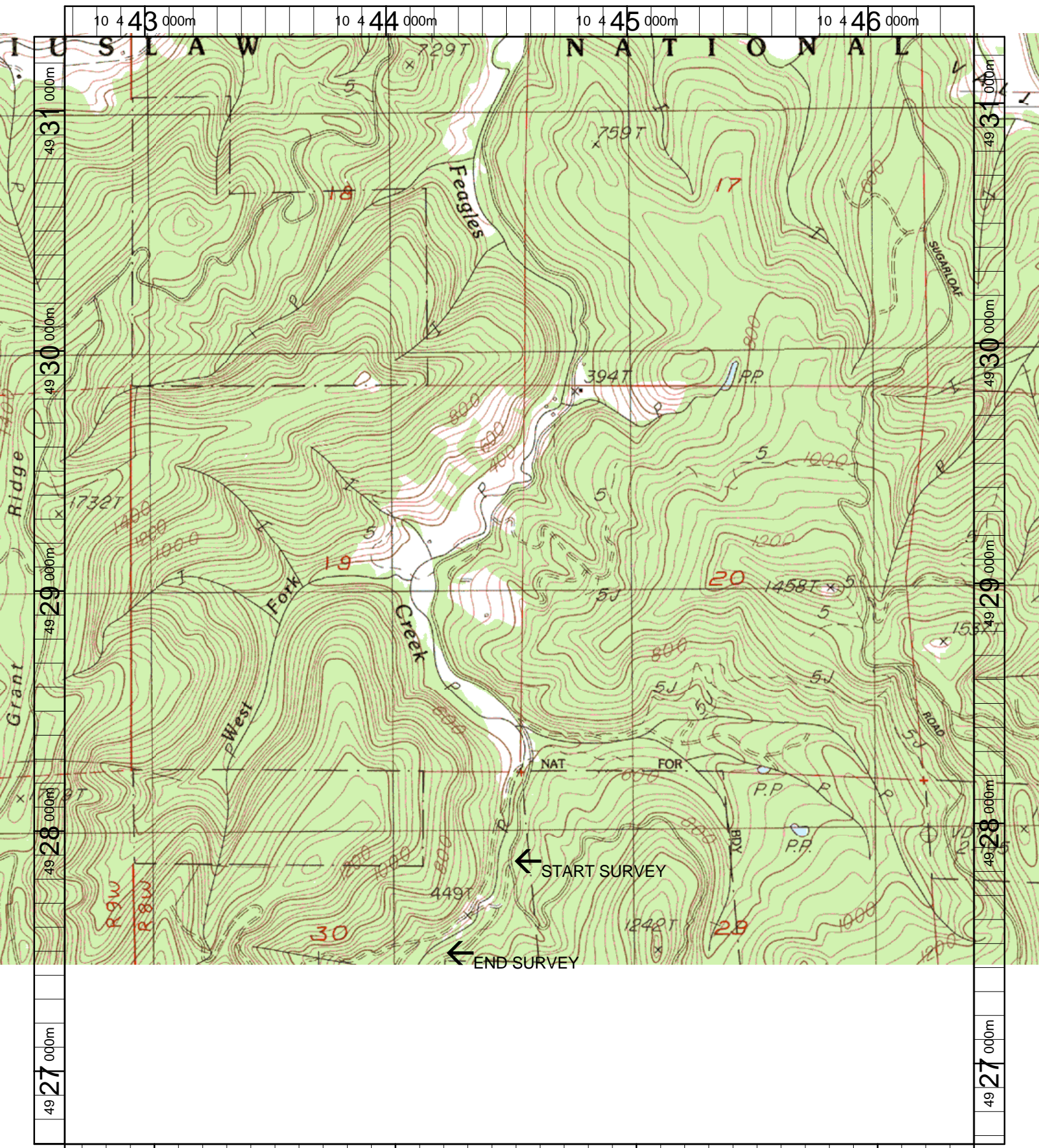
<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
27	BW	10	226.74	HS	TJ/ COHO, WL (NEWTS)	FISH PRESENT- COHO PHOT
28	SR	11	226.74	PN	H=1.5, PN, TJ/	H20 TEMP=12 DEG C
30	LP	00	254.34	HS	HS, COHO	COHO PRESENT
31	RI	01	256.34	HS	HS	
32	AL	10	256.34		COHO	COHO PRESENT
34	RI	02	275.04	HS		
35	RI	01	298.64	HS	/BW	
36	BW	10	298.64	HS	COHO, HS	COHO PRESENT
37	LP	00	309.74	BC	BC, COHO	COHO PRESENT
39	RI	00	331.54	CS	CS	
40	SB	00	334.44	CS		
41	LP	00	340.94		COHO	COHO PRESENT
42	RB	00	365.94	BV,WL	/BW, BV	
43	BW	10	365.94	HS	COHO, HS	COHO PRESENT
44	RI	00	380.44	BL	BV	CUTTINGS
45	LP	00	401.64	DJ,WL,HS	DJ, WL	AM. DIPPER
46	SC	00	407.24	WL, BV	COHO, BV	BEAVER
48	SC	00	422.54	WL, BV	BV	CUTTINGS
49	RI	00	447.54	WL, BV	BV	CUTTINGS
50	RI	00	457.74	WL, BV		CUTTINGS
51	SC	00	463.64		BV	

Comment Summary

Oregon Plan Monitoring Sites 2003

MONITORING AREA: 2-MC SITE ID: 31 FEAGLES CREEK POST-TX (MC-31)

<u>UNIT#</u>	<u>TYPE</u>	<u>CHAN</u>	<u>DIST. (m)</u>	<u>COMMENTS</u>	<u>NOTE ESTIMATOR</u>	<u>NOTE NUMERATOR</u>
52	RI	00	471.74		COHO, BV	COHO PRESENT



Name: HARLAN
 Date: 3/20/2003
 Scale: 1 inch equals 1666 feet

Location: 10 444529 E 4928990 N
 Caption: FEAGLES CREEK RESTORATION SITE - YAQUINA BASIN