

BCWPP IMPLEMENTATION PROJECT: PHASE II SUBBASIN K

Upper Colorado River Authority
TCEQ NPS Contract # 582-24-50242





AGENDA

PHASE I OVERVIEW

PHASE II OVERVIEW

TIMELINE & NEXT STEPS

BMP CONSTRUCTION

EDUCATION & OUTREACH INITIATIVES

PHASE I OVERVIEW

- Monitor storm water runoff into Brady Creek
- Began monitoring 2020
- Stormwater → Vortex Separator → Brady Creek
- Measured efficiency of the vortex separator to reduce nutrients and detritus (N, P, TSS, and BOD)
- Met reduction goals



PHASE II OVERVIEW

Subbasin I*



Subbasin K*






Subbasin K(South)*



*approximate boundary lines



PHASE II OVERVIEW

- Subbasin I* 
- Subbasin K* 
- Subbasin K(South)* 

*approximate boundary lines



PHASE II OVERVIEW

I VS. K(SOUTH)

Differences in:
**VORTEX SEPARATOR SIZE &
 PERCENT REMOVAL GOALS**

Table 15 SWMM predicted annual average percent removal of stormwater volume, TSS, TP, TN, and BOD by urban area subbasin for January 1, 2000 to December 31, 2009.

Urban Subbasin	Stormwater Volume (%)	TSS (%)	TP (%)	TN (%)	BOD (%)	Aqua-Swirl® Size (# of units) ^a
A	0	49	24	24	49	9(1)
B	0	49	25	25	49	12 (12)
C ^b	0	53	27	27	53	9(1)
D ^b	0	44	21	21	44	12 (6)
E ^b	0	56	28	28	56	10(1)
F ^b	0	40	20	20	40	12 (6)
G ^b	0	50	25	25	50	9(1)
H ^b	0	45	22	22	45	9(1)
I ^b	0	44	22	22	44	12(1)
J ^c	-	-	-	-	-	-
K (North) ^b	0	52	26	26	52	9(1)
K (South) ^b	0	50	25	25	50	9(1)
L ^c	-	-	-	-	-	-
Total Urban Brady Creek ^d	0%	48%	24%	24%	48%	-
Total Entire Urban Area ^d	0%	48%	24%	24%	48%	-

^a The diameter of the unit and the number of units must be considered approximate given the high uncertainty in SWMM predictions of peak flows.

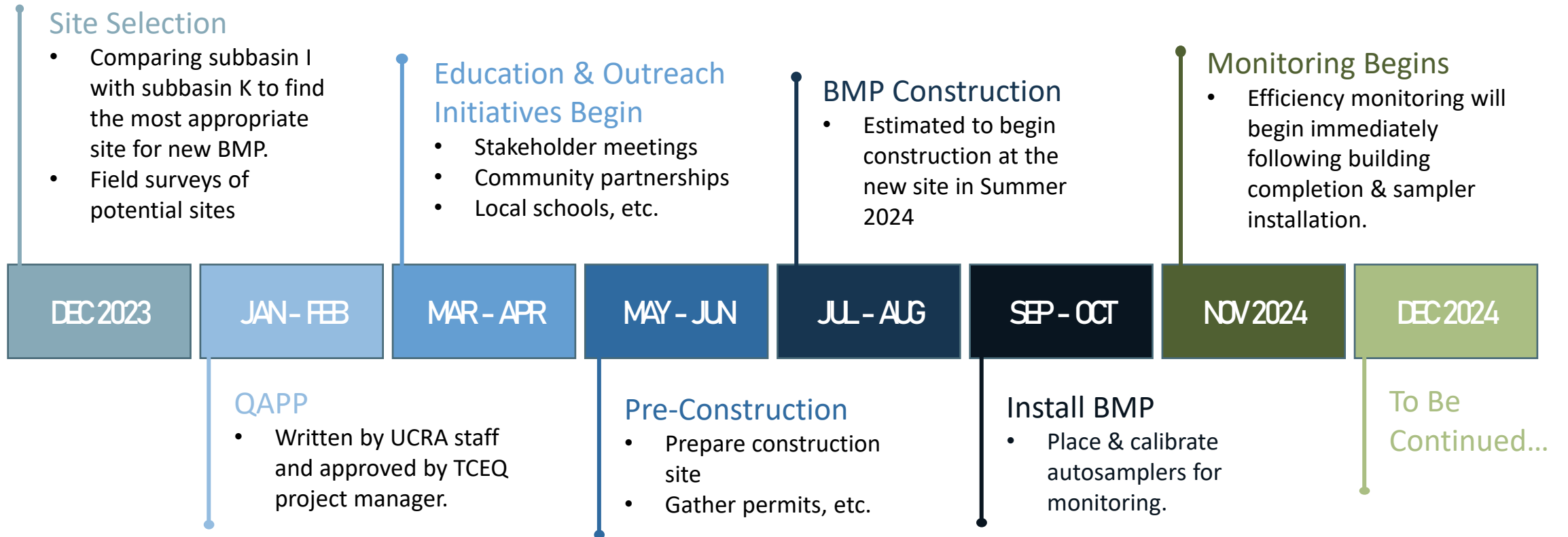
^b These subbasins comprise the urban areas draining into Urban Brady Creek as defined in the DO model.

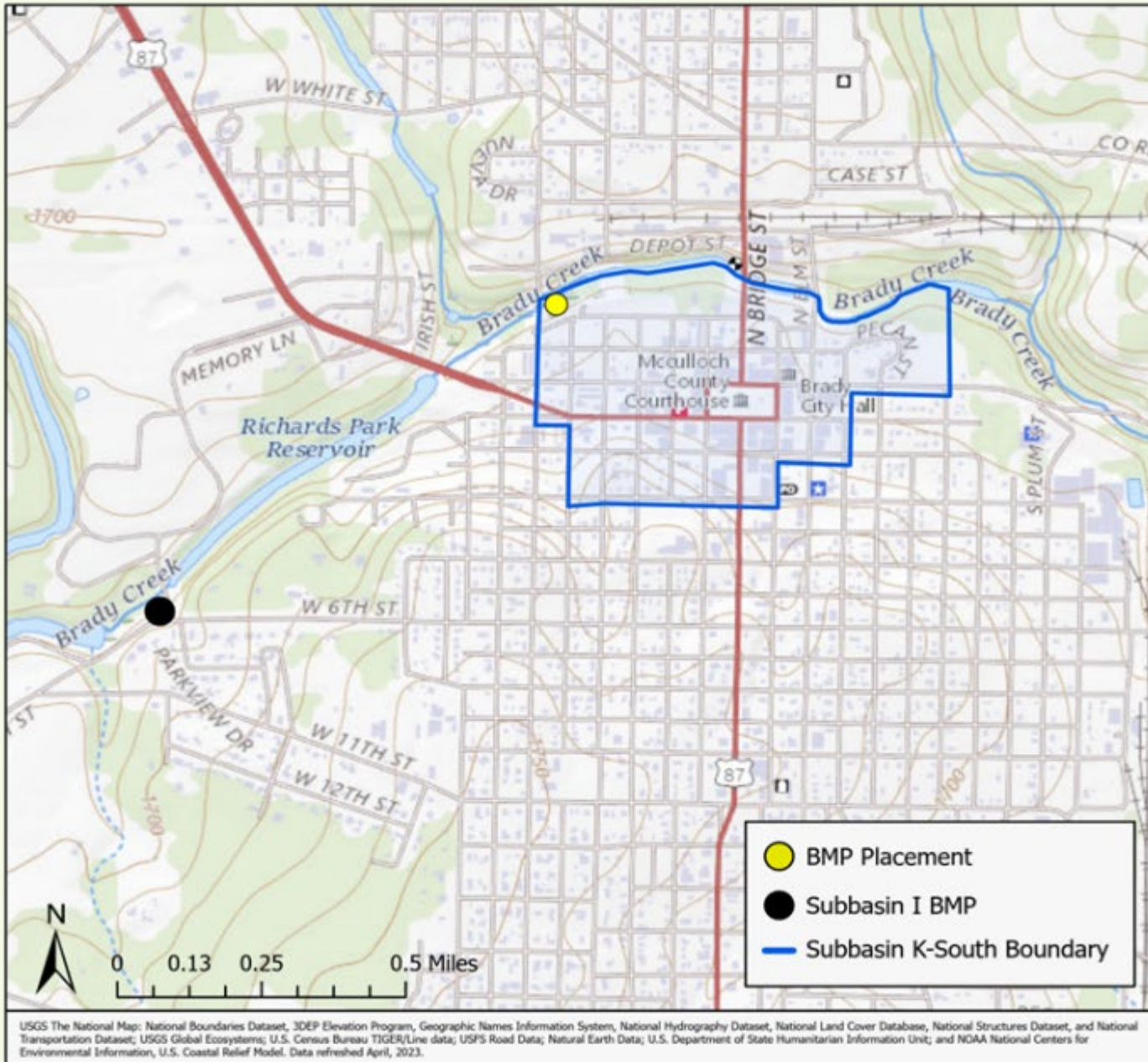
^c Subbasins J and L contain inconsequential amounts of urban land use and were not modeled with SWMM.

^d Percent removals computed as a simple average of the subbasins comprising this category.

PROJECT TIMELINE (*DRAFT*)

2023 - 2024





NEXT STEPS

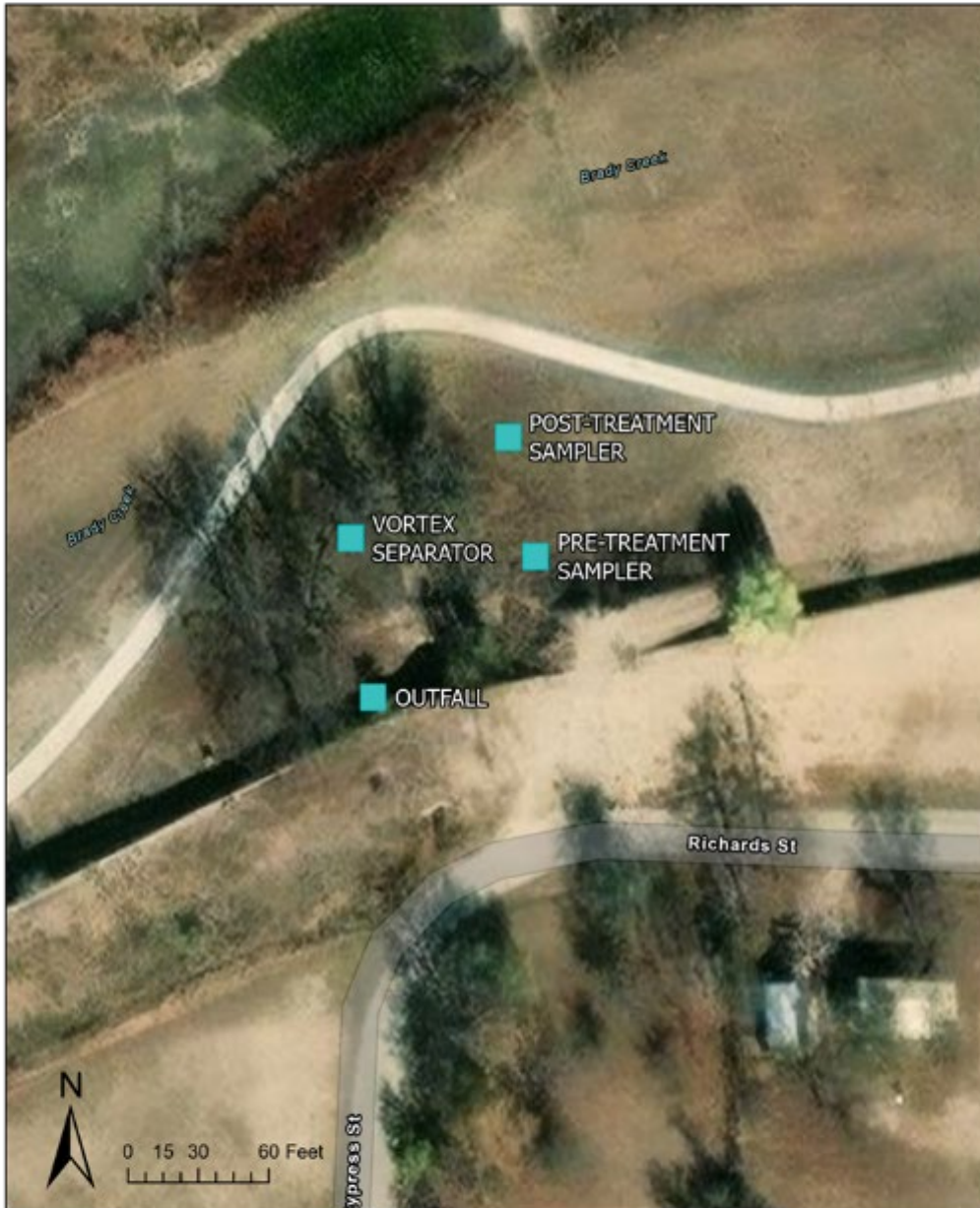
SUBBASIN K(SOUTH)

- Finish QAPP approval process
- Begin work on E & O initiatives
- Prepare for construction of new BMP

CONSTRUCTION: FROM PHASE I TO II



CONSTRUCTION: BMP SITE SKETCH

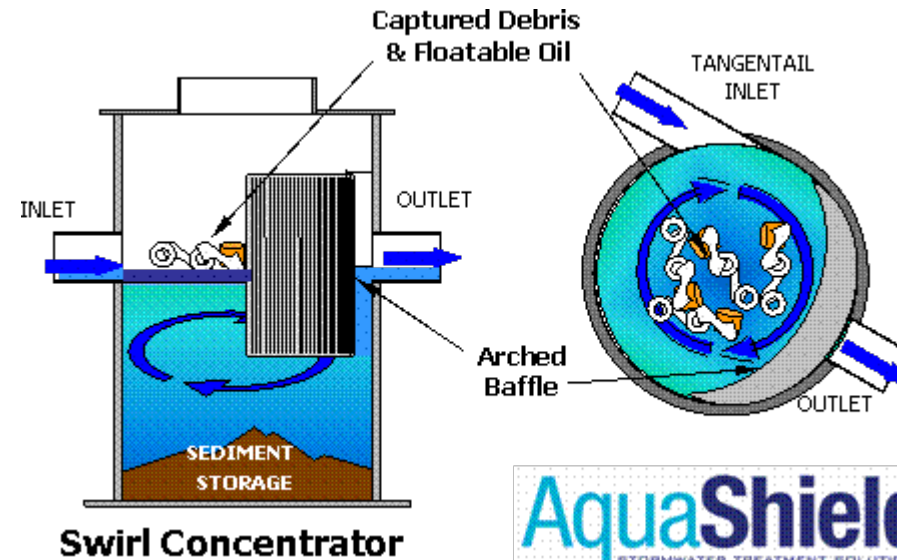


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Source: BCWPP Implementation, Subbasin K BMP Effectiveness Monitoring QAPP, Rev. 0, 2024

Subbasin K BMP goals:

- Directly reduce “pollution” loads
- Monitor flow rates
- Indirectly improve levels of dissolved oxygen



Swirl Concentrator



Source: Aqua-Swirl Concentrator Stormwater Treatment by AquaShield, System Operation Manual

EDUCATION & OUTREACH INITIATIVES



SOME IDEAS INCLUDE...

1. Local schools
 2. Informational materials
 3. Social media campaign
 4. Another large-scale event (BioBlitz)
- Activities in the classroom
 - Field trips to our site, Brady Creek, and/or Richard's park.
 - Distribution of informational materials
 - Bookmarks, water bill inserts, etc.
 - Social media outreach
 - Multiple posts on Instagram and Facebook to share project progress & significance

EDUCATION & OUTREACH INITIATIVES



KEEP BRADY BEAUTIFUL



PHASE I COMMUNITY PARTNERSHIPS



CTX MASTER GARDENERS



Source: UCRA 2023

THANK YOU

Upper Colorado River Authority

www.ucratx.org/contact-us

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SUPPLEMENTAL INFORMATION

Table 12 Urban land-use characteristics of City of Brady catchments

Urban Subbasin	Residential (ac.)	Commercial (ac.)	Industrial (ac.)
A	100	400	100
B	740	200	200
C	90	45	15
D	116	83	133
E	88	17	0
F	210	140	0
G	112	0	0
H	100	0	0
I	220	0	0
J	0	0	0
K	24	192	24
L	0	0	0
Total	960	497	172

Source: UCRA (2010b)