

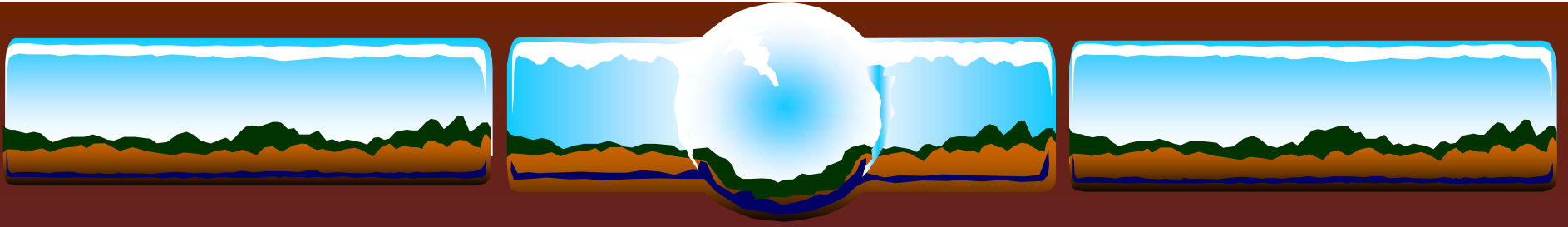
INCIDENTAL RECHARGE

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DEFINITION

Incidental Recharge is the ground water recharge (infiltration) that occurs as a result of human activities unrelated to a recharge project, for example, irrigation and water diversion (unlined canals).

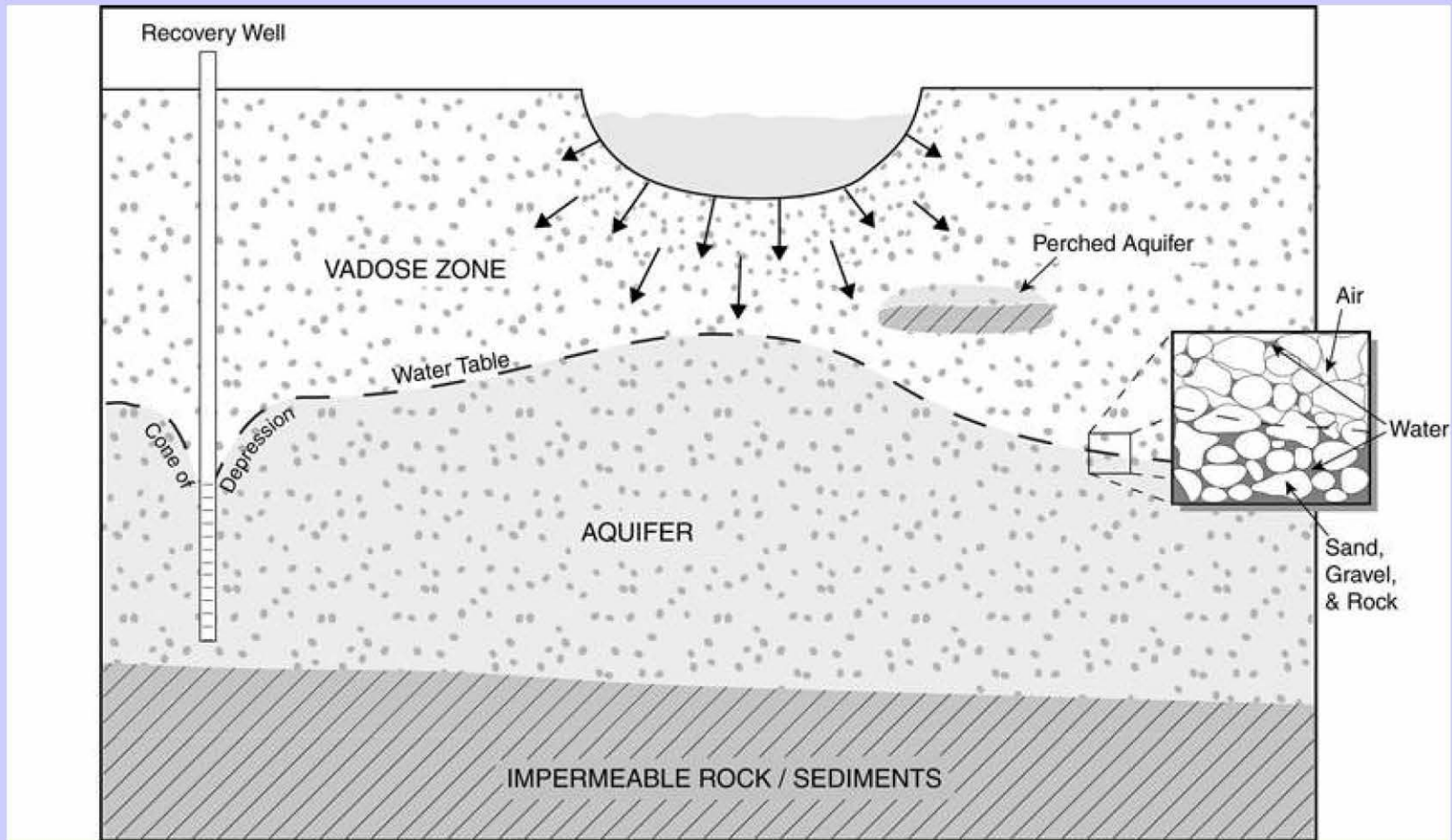
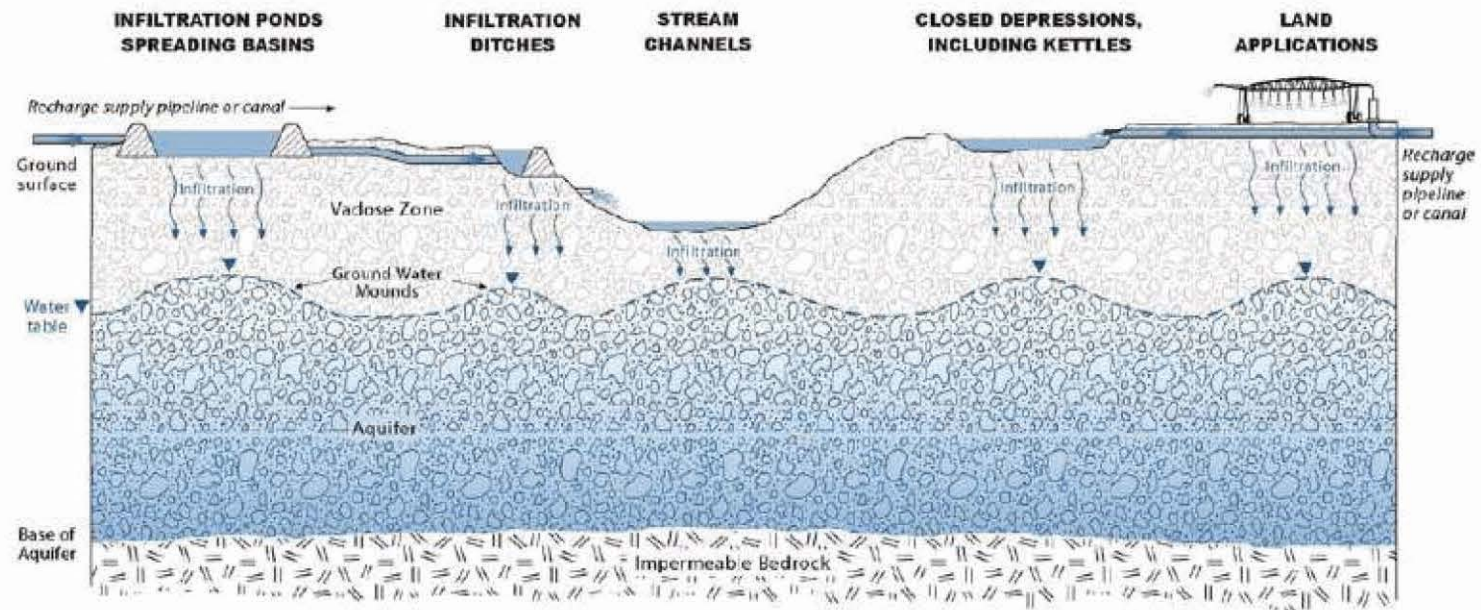
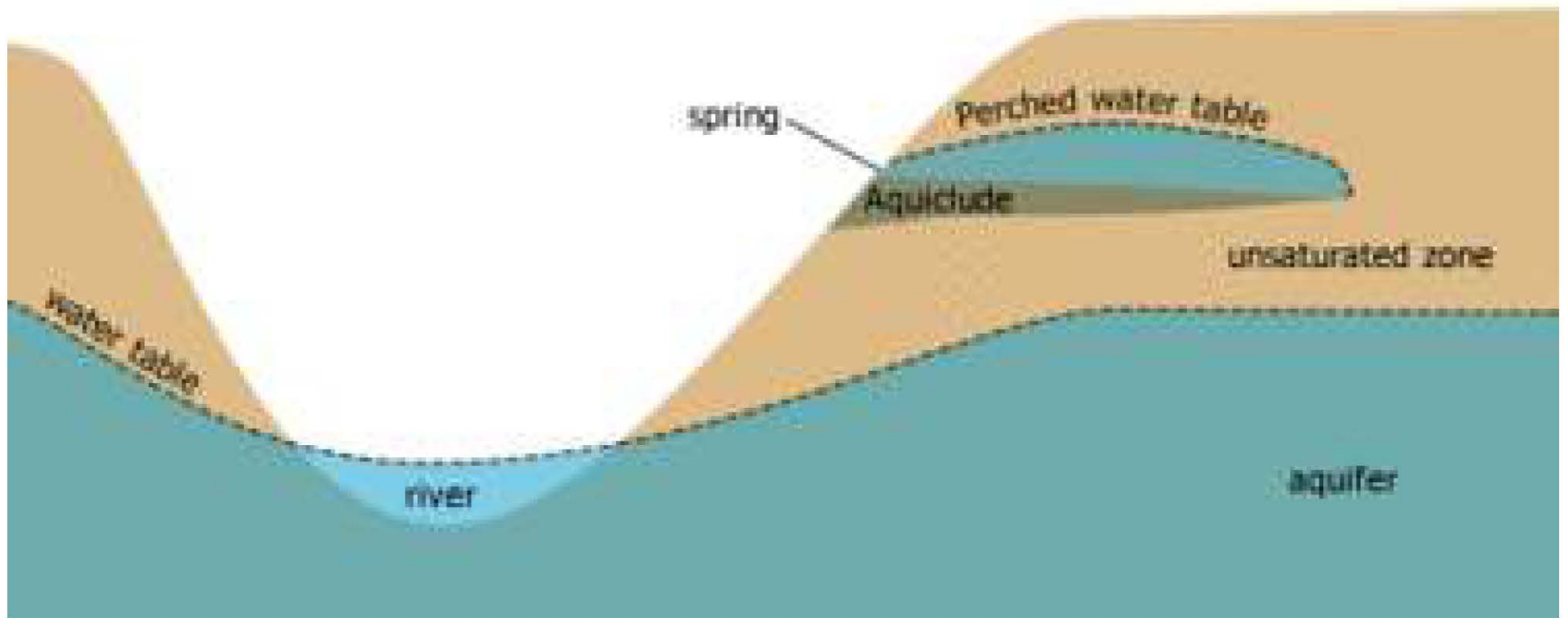


Figure VI-3 (revised)

EXAMPLES OF SURFACE INFILTRATION TECHNOLOGIES



Source: Ralf Topper, et. al., Colorado Geological Survey Department of Natural Resources, Artificial Recharge of Ground Water in Colorado - A Statewide Assessment, 2004.



ANNUAL SPRING DISCHARGE TO SNAKE RIVER
BETWEEN MILNER AND KING HILL
1902-2005

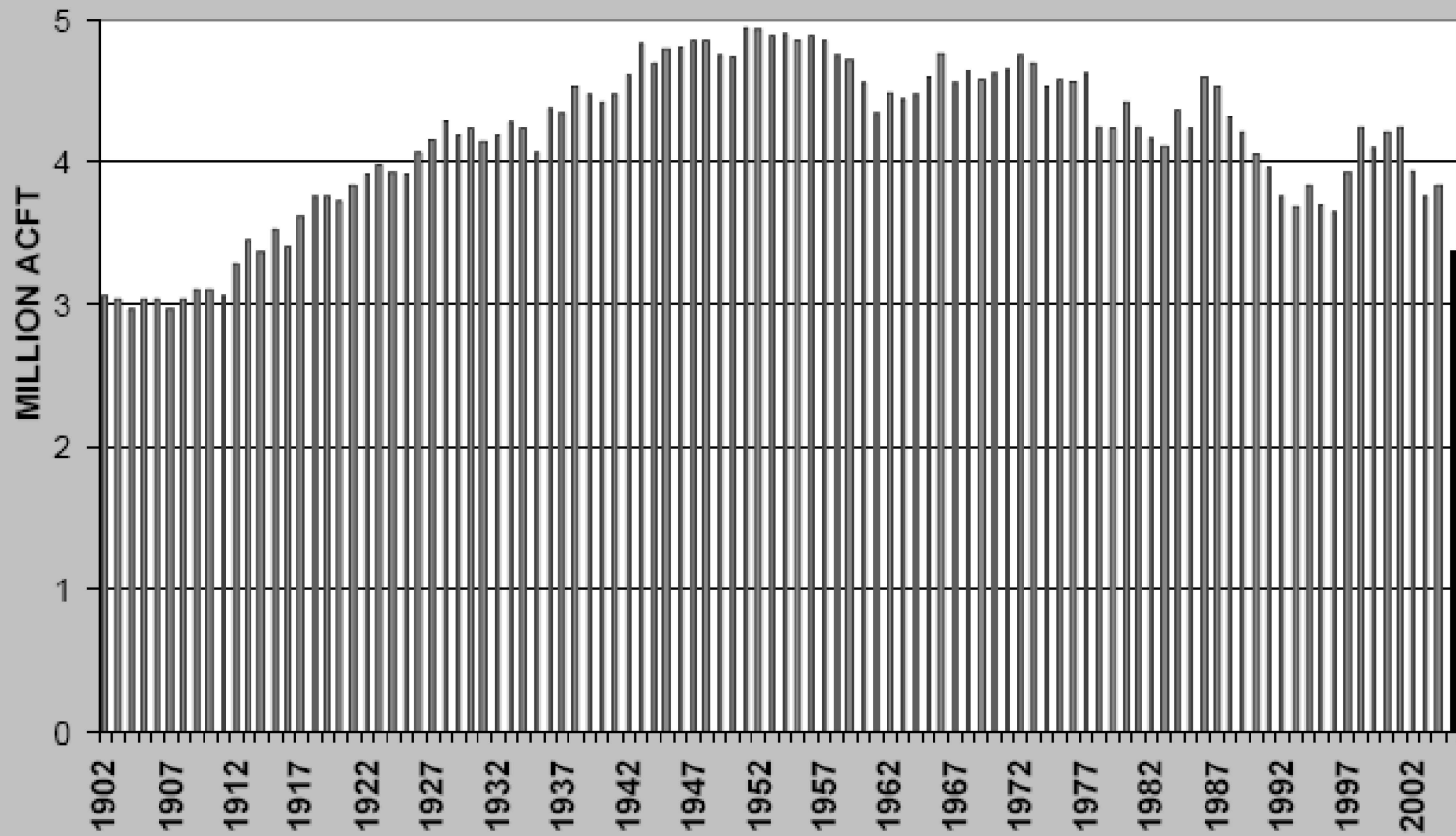


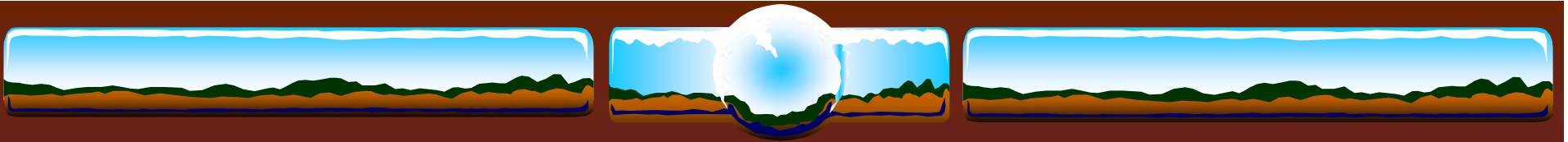
TABLE 7. Diversions During 2006 Irrigation Year from Snake River, Dry Bed (Great Feeder Canal).

Diversion Number	Name	Total Diverted (acre-feet)	Service Area (acres)	Ac-ft/ac Diverted
13037997	C Hickman Pump	0	10	-
13038025	Butler Island Canal	13,342	990	13.5
13038030	Ross & Rand Canal	1,313	170	7.7
13038050	Steele Canal	0	140	-
13038055	Harrison Canal	133,521	14,230	9.4
13038065	Cherney Canal	370	130	2.8
13038075	G Scott Pump	239	(a)	-
13038079	J Brown Pump	19	14	1.4
13038081	G Scott Pump	91	-	-
13038084	Subdivision Pump	151	(a)	-
13038085	Rudy Canal	67,207	5,530	12.2
13038090	Lowder Canal	15,735	1,000	15.7
13038098	Kite & Nord Canal	1,724	210	8.2
13038110	Burgess Canal	288,753	22,200	13.0
13038113	M Hill Pump	127	50	2.5
13038115	Clark & Edwards Canal	22,807	1,740	13.1
13038145	Croft Canal	331	60	5.5
13038147	A Zaugg Pump	1	19	0.1
13038148	G Holman Pump	0	6	-
13038149	G Marna Pump	10	3	3.3
13038150	East Labelle Canal	37,103	2,850	13.0
13038151	B Grover Pump	73	25	2.9
13038180	Rigby Canal	54,063	3,920	13.8
13038183	K Foster Pump	114	80	1.4
13038201	White Island Pump	370	140	2.6
13038205	Dilts Canal	6,556 (b)	630	10.4
13038210	Island Canal	45,687	3,760	12.2
13038225	West Labelle & Long Island Canal	120,246	10,500	11.5
13038305	Parks & Lewisville Canal	105,157	9,800	10.7
13038315	North Rigby Canal	15,543	1,210	12.8
13038331	Jefferson Hills Pump	0	110	0.0
13038340	White Canal	1,292	110	11.7
13038352	D. Phillips Pump	7	52	0.1
13038356	Von Baron	11	-	-
13038360	Bramwell Canal	198	160	1.2
13038362	Ellis Canal	701	60	11.7
13038365	Idaho Fresh Pac Pump	619	145	4.3
13038371	J T Jones Pump	40	(a)	-
13038372	C Jones Pump	108	40	2.7
13038382	W Dabell Pump	190	231	0.8
13038384	D Stoker Pump	149	206	0.7
13038386	J N Erickson Pump	524	177	3.0
TOTAL		934,600	80,708	11.6 (c)

(a) Acreage not determined

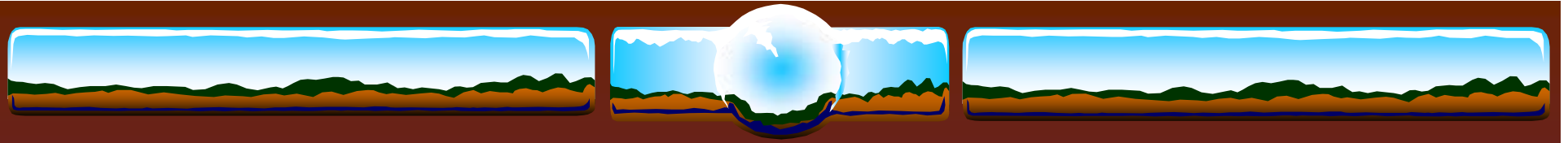
(b) Includes diversion 13038204.

(c) Does not include diversions with unknown acreage or zero amount diverted.

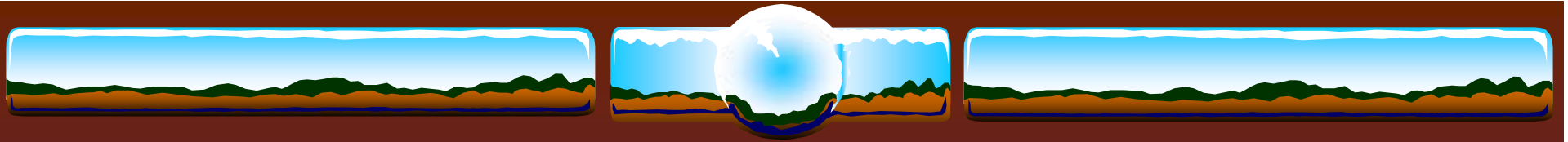


Quantification

- ❖ Precise measurement of incidental recharge would require the following:
 - 1) Discharge measured at the head of the canal
 - 2) Minus return surface-flow to the river (at end of canal)
 - 3) Minus crop consumptive use and evaporation (evapotranspiration)
 - 4) Plus precipitation utilized by crops
 - 5) Analysis of where the incidental recharge ends up (river, deep aquifer, shallow or perched aquifer).



Opportunities, Risks, & Constraints



OPPORTUNITIES

❖ Encourage

- Keep water running in the canals as long as possible.

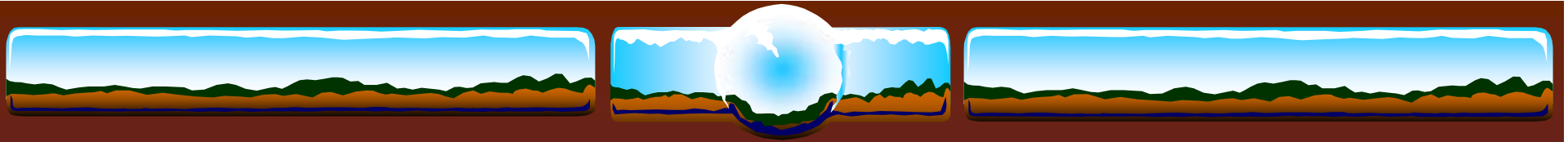
❖ Discourage

- lining or sealing of canals
- conversion from flood to sprinkler irrigation
- any other methods of water conservation



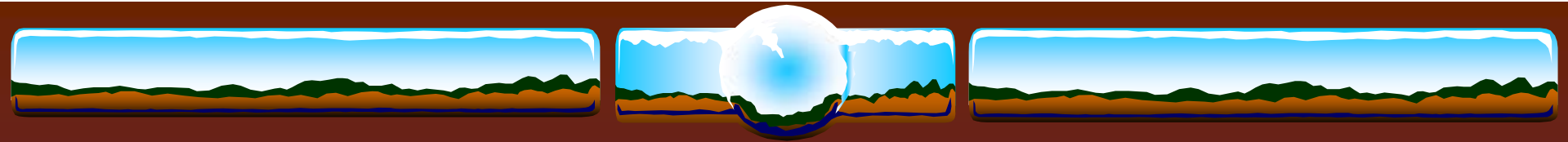
Risks

- ❖ Could result in raising local or perched aquifer levels - flooding basements and low-lying areas (mosquito habitat).
- ❖ Incidental recharge may not provide the benefit where it is intended (doesn't reach the deep aquifer).



Constraints

- ❖ Limited by water supply and water-right restrictions.
- ❖ Winter-Water-Savings storage contracts.
- ❖ Costs to keep canals running when not irrigating.



Discussion