



May 19, 2017

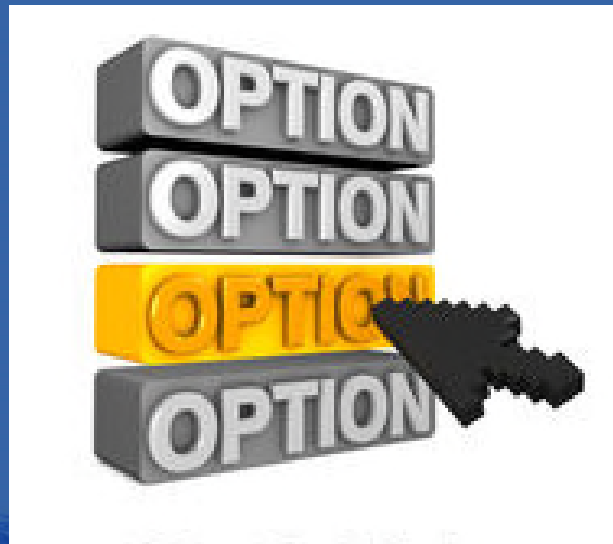
UNTANGLING REUSE REGULATIONS:

State/Federal Limitations & Opportunities for Reuse Projects

Nathan E. Vassar

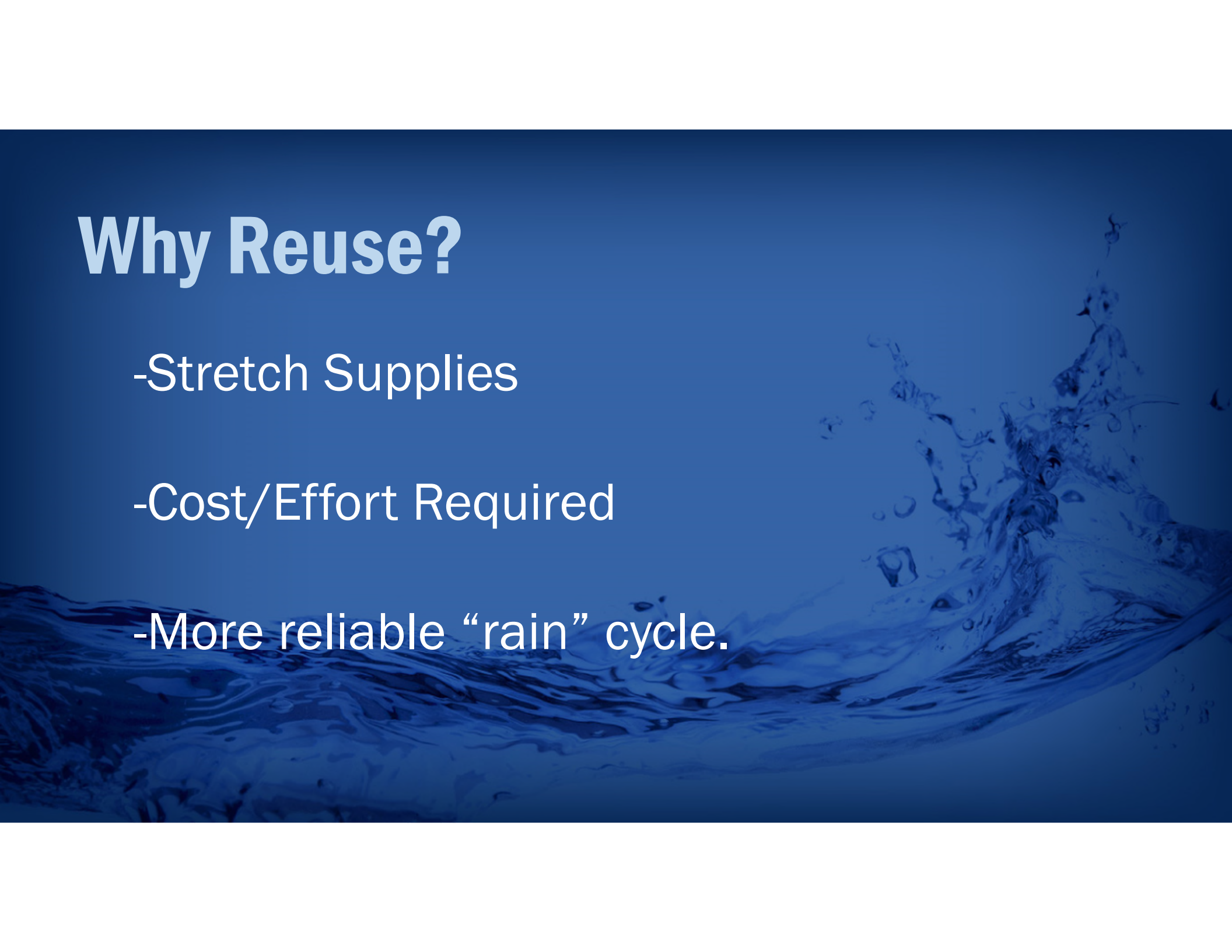


Why Reuse?



Why Reuse?

- Stretch Supplies
- Cost/Effort Required
- More reliable “rain” cycle.



Other Options/Menu Offerings

- New Supply Development
- Contract Water
- Conservation



Testing Reuse Knowledge

“A Water Rights holder is required to discharge certain percentages of water it diverts back into a receiving stream.”

True or False?

Testing Reuse Knowledge

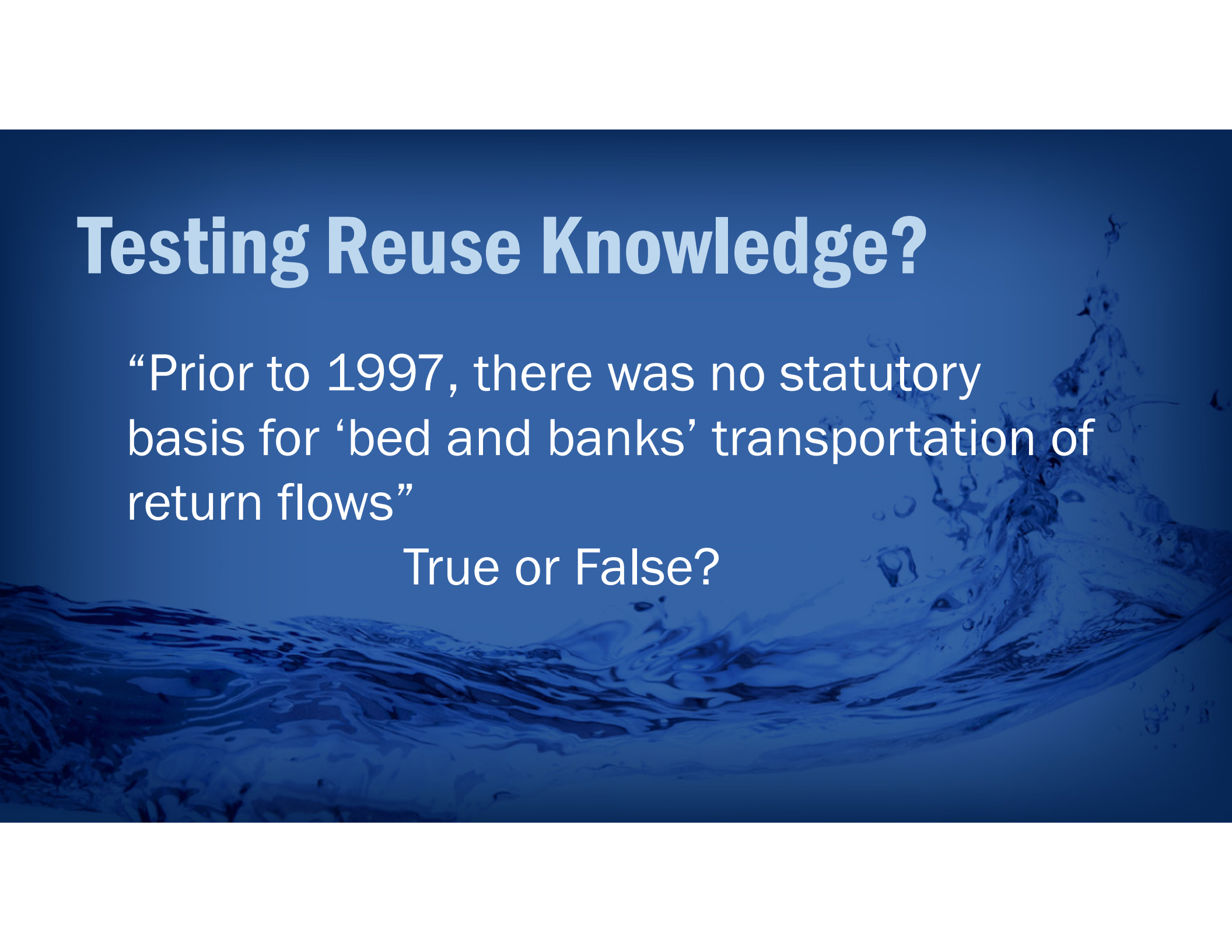
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True or False?

Testing Reuse Knowledge?

“Prior to 1997, there was no statutory basis for ‘bed and banks’ transportation of return flows”

True or False?



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True or False?

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“TCEQ only requires compliance with traditional Chapter 290 drinking water requirements for Direct Potable Reuse Projects.”

True or False

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True or False

Untangling the Red Tape



- Indirect Reuse
- Direct Reuse
- Federal Overlay
- Opportunities

Indirect Reuse: What is a Return Flow?

- No Statutory Definition
- TCEQ Rules include applicable definition.



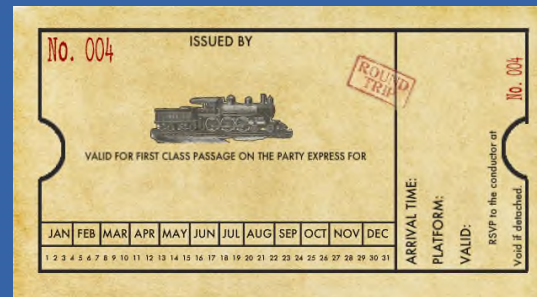
Indirect Reuse: What is a Return Flow?

- "That portion of state water . . .
- diverted from a water supply and beneficially used
- which is not consumed as a consequence of that use
- and returns to a watercourse . . . "

30 Tex. Admin. Code § 297.1(44) (emphasis added)

Indirect Reuse: What Do I Need to Permit it?

1) Transportation ticket.



2) Ownership.



Indirect Reuse: What Do I Need to Permit it?


- ## 1) Transportation ticket: Bed and Banks Authorization



Indirect Reuse: What Do I Need to Permit it?

- 1) Transportation Ticket
- 2) Ownership

TEXAS COMMISSION ON ENVIRONMENTAL QUALITY



WATER USE PERMIT

PERMIT NO. 12810 TYPE 99 11.121, 11.042

Permittee: Daisy Farms, LLC Address: 4482 Highway 24
Paris, TX 75462

Filed: April 12, 2013 Granted: October 12, 2015

Purpose: Industrial, Agriculture, Livestock, and Recreation County: Lamar

Watercourses: Unnamed Tributaries of Aude Creek and Aude Creek, Tributary of the Sulphur River Watershed: Sulphur River Basin

WHEREAS, Daisy Farms, LLC (Applicant or Permittee) seeks a Water Use Permit to construct and maintain three proposed dams and reservoirs (Proposed Ponds 1 & 2, and Williams Pond) and maintain six existing dams and reservoirs (Existing Ponds 1 through 6) and a Sump, on unnamed tributaries of Aude Creek, tributary of the Sulphur River, Sulphur River Basin, Lamar County, for recreational, industrial, agricultural and livestock purposes; and

WHEREAS, Applicant also seeks authorization to divert up to 17,500 acre-feet per year at a maximum diversion rate of 250 cfs (112,250 gpm) from Aude Creek and authorization to use the bed and banks of the Sump and Williams Pond for storage and subsequent diversion and use of 15,000 acre-feet per year for industrial, agricultural, livestock, and recreational purposes; and

WHEREAS, Applicant also seeks authorization to use the bed and banks of Existing Ponds 1 through 6 and Proposed Ponds 1 and 2 to convey 7,000 acre-feet per year of the 15,000 acre-feet of water diverted from the Sump and Williams Pond to Existing Ponds 1 through 6 and Proposed Ponds 1 and 2, for subsequent diversion and use for industrial, agriculture, livestock, and recreational purposes; and

WHEREAS, Applicant also seeks authorization to use the bed and banks of Proposed Ponds 1 and 2 and Existing Ponds 1 through 6 to store, transport and divert up to 1,000 acre-feet of water per year purchased from the City of Paris, for industrial, agricultural, livestock, and recreational purposes; and

WHEREAS, Applicant also seeks authorization to divert and use 245 acre-feet of the combined natural inflows to Existing Ponds 1 through 6 and Proposed Ponds 1 and 2 for industrial, agricultural, livestock, and recreational purposes; and



Indirect Reuse: What Do I Need to Permit it?

Avoid Traps:

- Transportation Right alone is insufficient. Water right is the vehicle to permit indirect reuse return flows.
- Due diligence of source water: ownership retained by seller?

Indirect Reuse: Statutory Basis



Texas Water Code §11.042 – Transportation Ticket

Texas Water Code § 11.046 – Surplus Water Discussion

Texas Water Code § § 11.121; 11.122 – Permits/Amendments
Required

Testing Reuse Knowledge

“Surplus Water” is:

- a) All water returned to a state water course after diversion and use.
- b) Only water in excess of beneficial use that is returned to a stream.
- c) Water that results from unexpected rainfall/storms.

Testing Reuse Knowledge

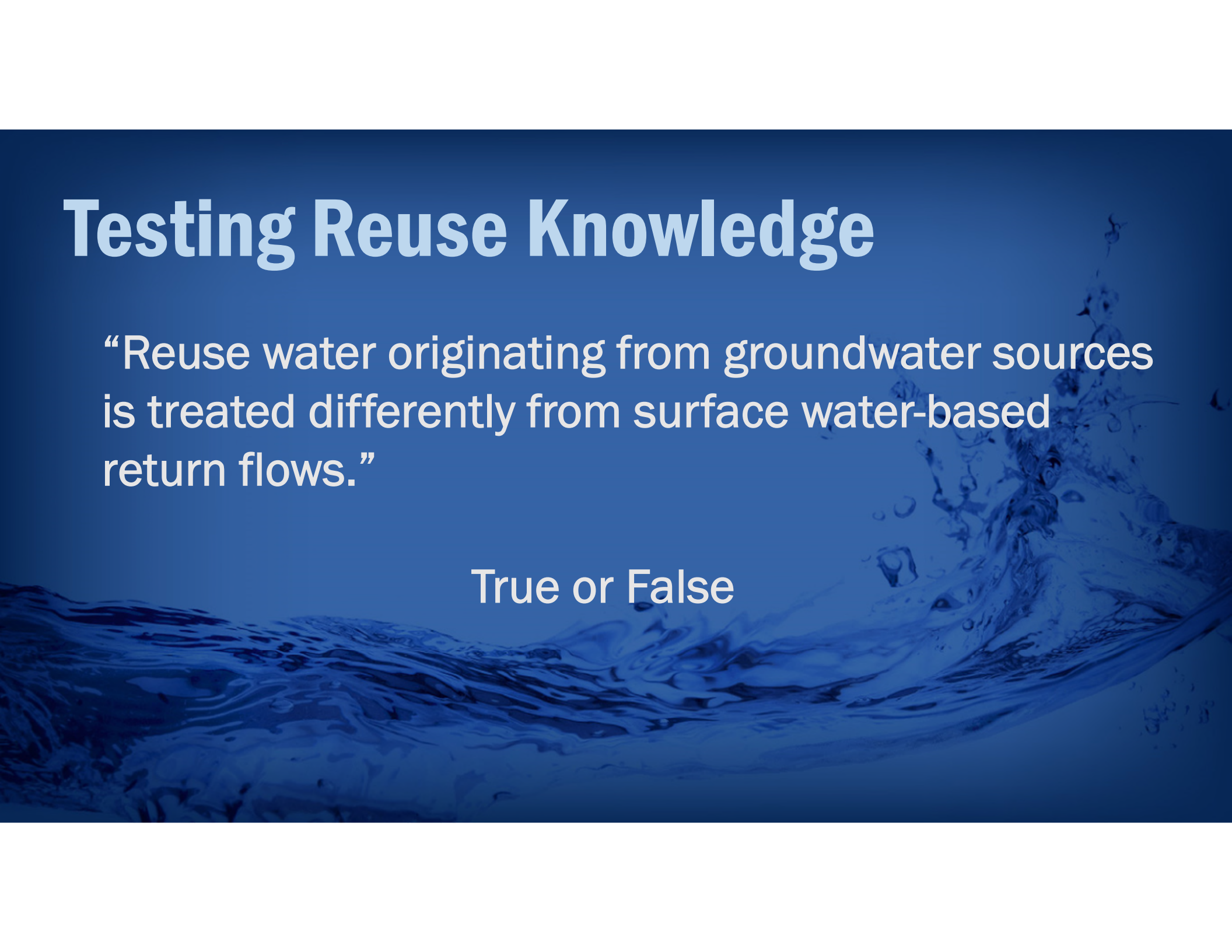
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Testing Reuse Knowledge

“Reuse water originating from groundwater sources is treated differently from surface water-based return flows.”

True or False



Testing Reuse Knowledge

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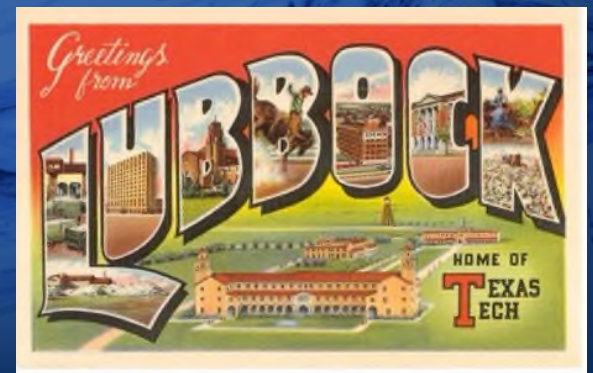
How Indirect Reuse Requirements Have Changed

Brazos River Authority's "System Operations" Permit ("SysOps")



How Indirect Reuse Requirements Have Changed

R.E. Janes Gravel Co. v. Tex. Comm'n on Env'tl. Quality, - - -S.W.3d- - -, 2016 WL 7323307 (Tex. App.—Hous. [14th Dist.] Dec. 15, 2016, no pet. h.).



How Indirect Reuse Requirements Have Changed

-Not precluded from seeking return flows after discharges have begun.

-Can still appropriate water discharged by others, but may be interrupted.



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How Indirect Reuse Requirements Have Changed

- *“HOV Lane” for Groundwater-based Return flows.*

- *Remaining Uncertainties.*



Face of Reuse Permits

-Environmental Flow Conditions

-Accounting

-Capturing future return flows

(1) Date	(2) Allowable Diversion With All Losses and With All Commitment Water Accounted For	(3) Of Huntsville's Effluent Next 24 Hours	(4) Of Huntsville's Effluent and MUDA's Effluent Next 24 Hours	(5) Allowable Diversion With All Losses and With Only Huntsville's Commitment Water Accounted For	(6) Of MUDA's Effluent Next 24 Hours	(7) Of Huntsville's Effluent Next 24 Hours
	gallons	gallons	gallons	gallons	gallons	gallons
12/31/11	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/01/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/02/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/03/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/04/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/05/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/06/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/07/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/08/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/09/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/10/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/11/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/12/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/13/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/14/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/15/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/16/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/17/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/18/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/19/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/20/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/21/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/22/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/23/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/24/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/25/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/26/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/27/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/28/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/29/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/30/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
01/31/12	710,431	2,000,000	2,710,431	899,280	2,000,000	2,899,280
02/01/12	552,558	2,000,000	2,552,558	899,440	2,000,000	2,899,440
02/02/12	552,557	774,484	1,327,042	899,440	774,484	1,473,924

Practice Pointers for Indirect Reuse

- The Right Project Team
- Understand Goals: Is a reuse right needed/necessary?
- Return Flow Reliability/Downsides

Direct Reuse

- Overview
- Differences and similarities
- Utility Goals/Challenges



Direct Nonpotable Reuse

-Direct Non Potable Reuse:

-Chapter 210 Texas Administrative Code

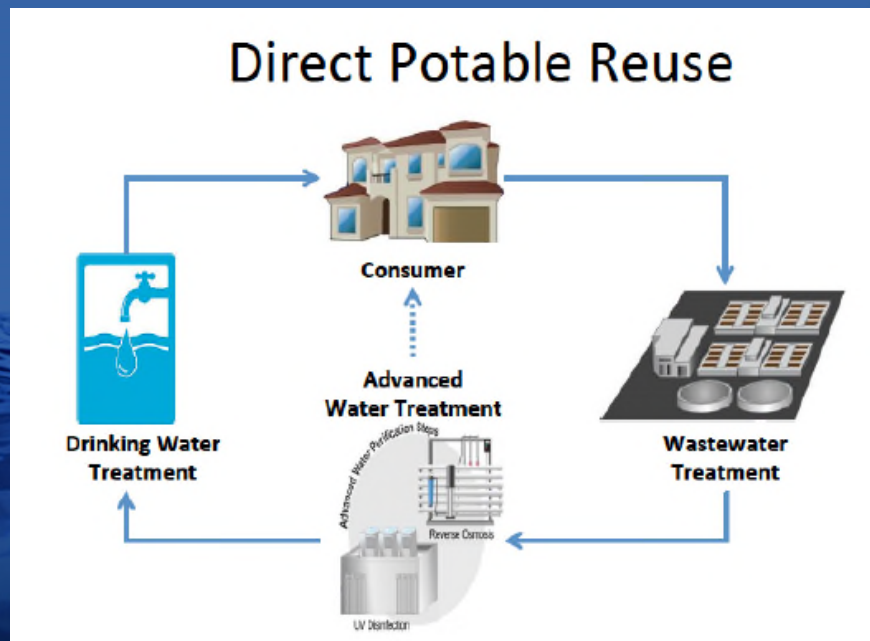
**Type 1 Uses*

**Type 2 Uses*



Direct Potable Reuse

-Direct POTABLE Reuse



Testing Reuse Knowledge

-Which of the following have not pursued direct potable reuse projects in Texas:

- a) El Paso
- b) Big Spring
- c) Wichita Falls
- d) Texarkana
- e) Brownwood

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Testing Reuse Knowledge

-Which TCEQ Authorizations are required for direct potable Reuse

- a) Chapter 290.39(l) exceptions
- b) Construction authorization
- c) Both (a) and (b)
- d) None of the above: EPA steps in and regulates direct potable reuse.

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Direct Potable Reuse

- Federal Overlay (Safe Drinking Water Act)

- TCEQ implementation practices



Direct Reuse Best Practices

- Long-term vs short-term goals
- Right Team
- Compliance with 210/290 and pitfalls.



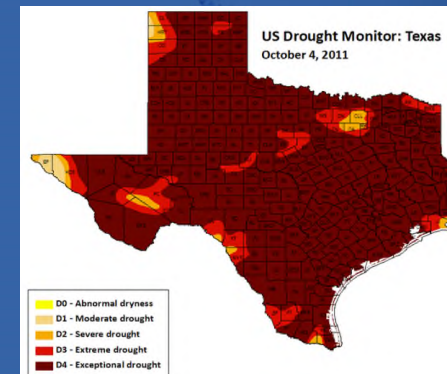
Future of Reuse Options

- Water Quality Considerations
- Alternate Sources
- Permitting changes
- Environmental Flow/Natural “Alteration” Issues.



Overall Recommendations/Options

- Value of Water Supply Audit
- Planning before drought hits.
- Relative costs of obtaining reuse supplies vs. other options.
- Engage customers and other regional suppliers.



A dynamic splash of water in shades of blue, moving from the top left towards the right, creating a sense of motion and energy.

QUESTIONS?

Nathan E. Vassar

nvassar@lglawfirm.com

(512) 322-5867

