

Yakima River Steelhead: An Overview of Mainstem Spawning Activity

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Photo: Zack Mays

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Yakima River Summer Run Steelhead

Populations

upper Yakima R.
Gmean: 151

Naches R.
Gmean: 840

Toppenish Cr.
Gmean: 599

Satus Cr.
Gmean: 660

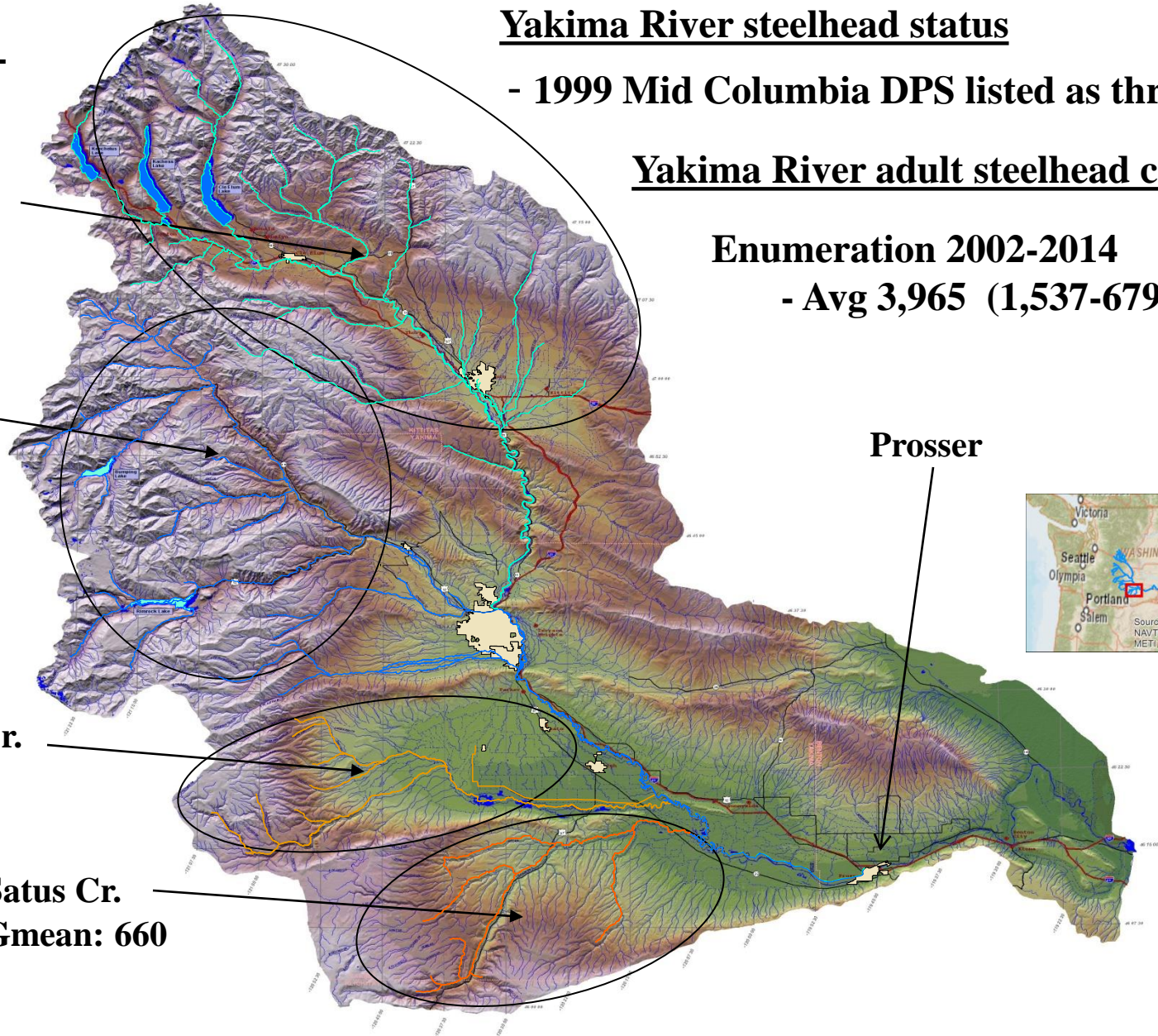
Yakima River steelhead status

- 1999 Mid Columbia DPS listed as threatened

Yakima River adult steelhead counts

Enumeration 2002-2014

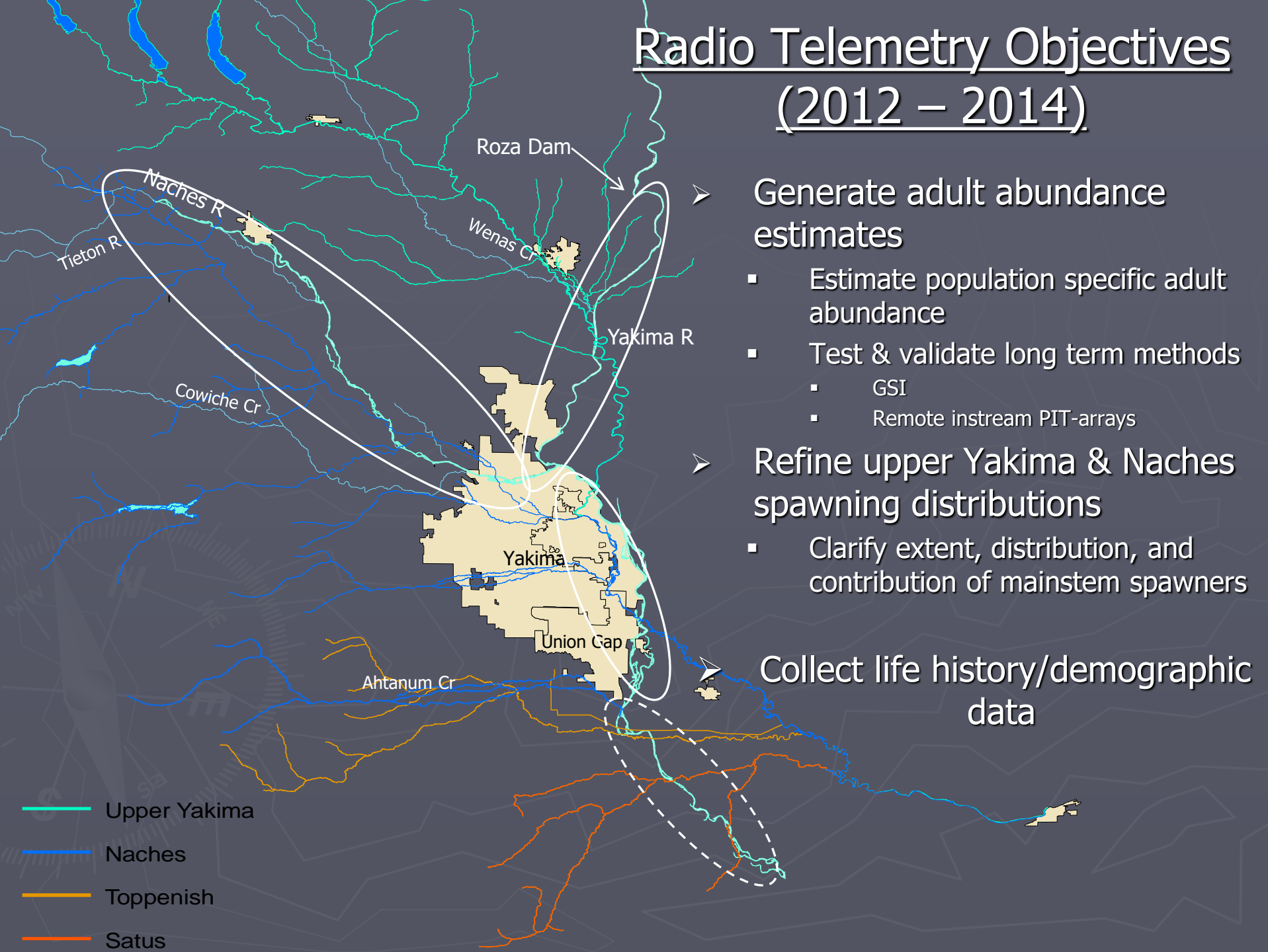
- Avg 3,965 (1,537-6796)



Prosser



Radio Telemetry Objectives (2012 – 2014)



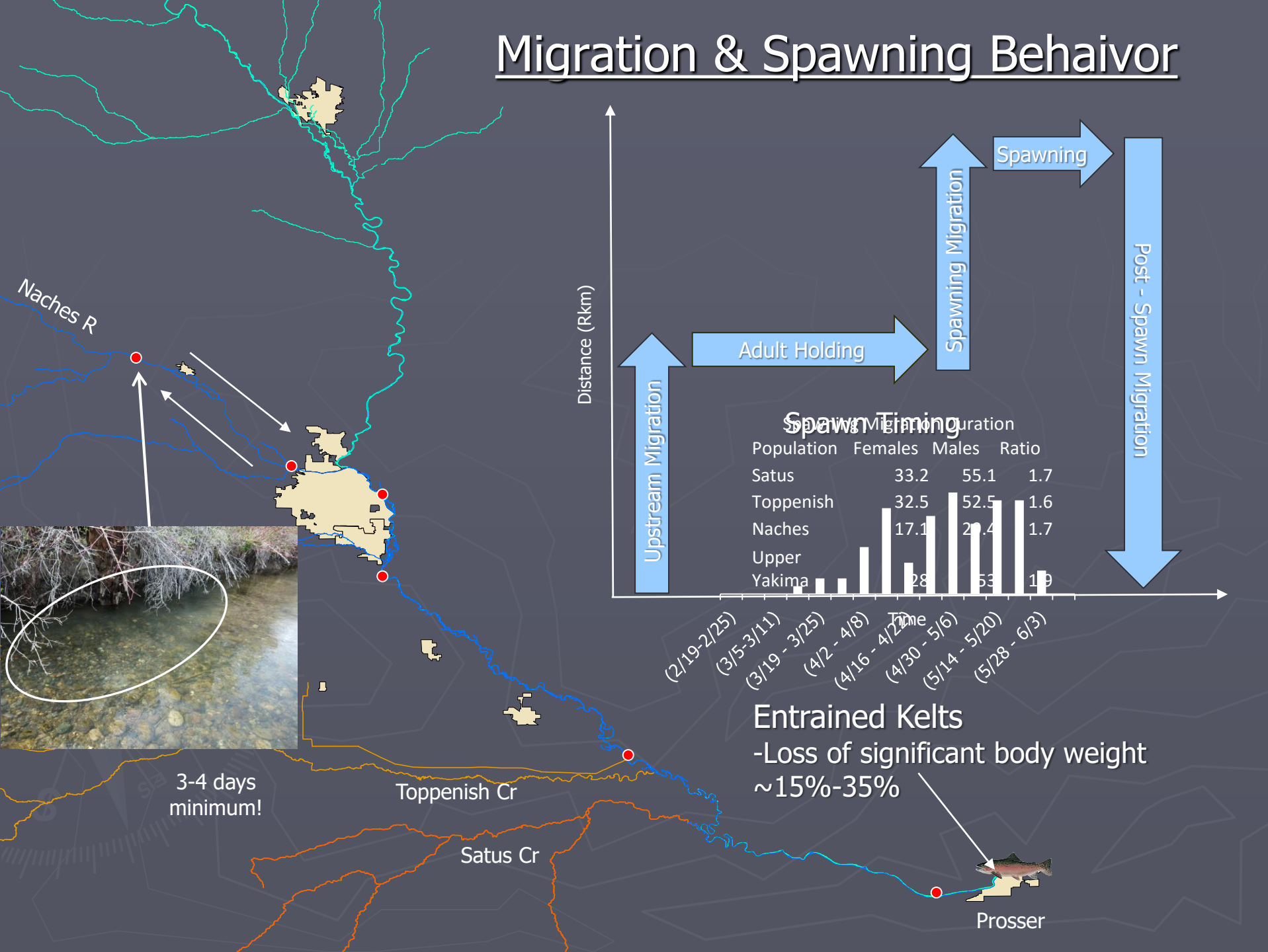
- Generate adult abundance estimates
 - Estimate population specific adult abundance
 - Test & validate long term methods
 - GSI
 - Remote instream PIT-arrays
- Refine upper Yakima & Naches spawning distributions
 - Clarify extent, distribution, and contribution of mainstem spawners

Collect life history/demographic data

Direct Evidence vs Circumstantial Evidence

- **Direct Evidence-** supports the truth of an assertion directly, i.e., without an intervening inference
 - **Visual confirmation of a steelhead digging a redd and spawning**
- **Circumstantial Evidence-** Information and testimony presented by a party in a civil or criminal action that permit conclusions that indirectly establish the existence or nonexistence of a fact or event that the party seeks to prove.
- **Circumstantial Evidence-** Information and ~~testimony~~ **data** presented by a **Biologist** ~~party in a civil or criminal action~~ that permit conclusions that indirectly establish the existence or nonexistence of a ~~fact or event that the party seeks to prove.~~ **steelhead spawning activity in Yakima River mainstem locations.**

Migration & Spawning Behavior



Yakima River: Selah Reach

➤ Spawning Activity

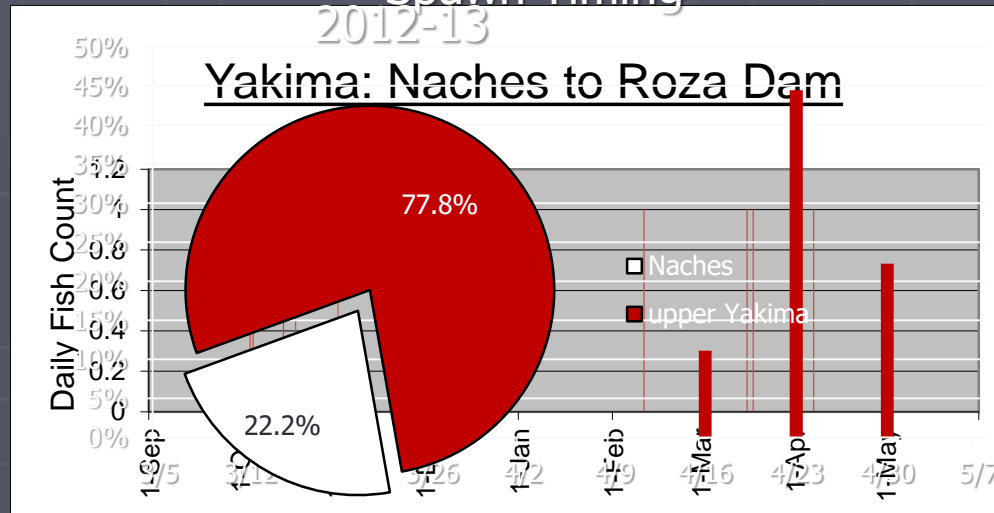
Year	2012	2013	2014
# radio tagged	4	5	3
# fish	~52	~45	~26
% of population	10.2%	13.4%	7.1%

➤ 2 Sthd entrained as post spawned kelts:

- 1.4lbs (25% body weight)
- 0.7lbs (14% of body weight)



Selah Reach Genetics Spawn-Timing



Yakima River: Gap to Gap Mainstem

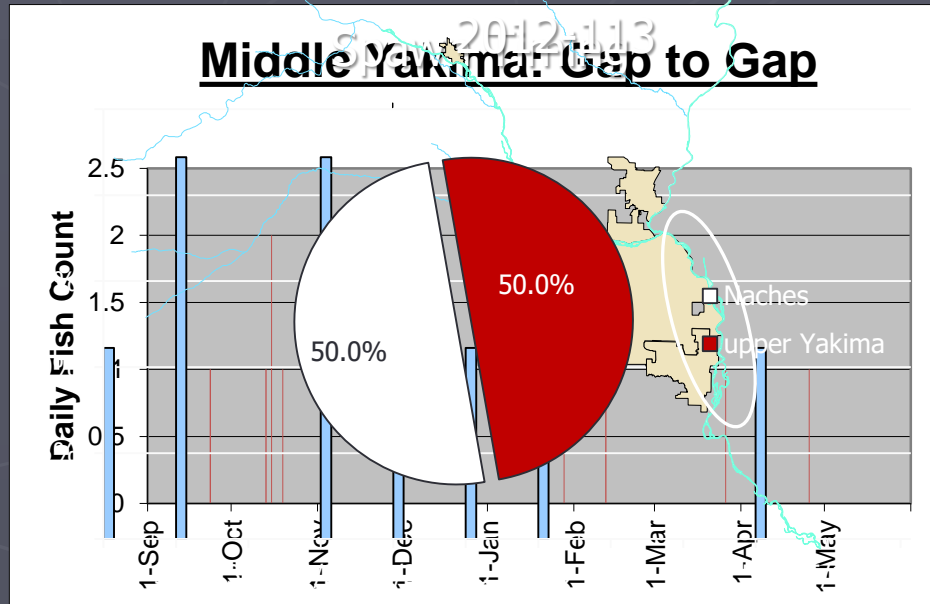


➤ Spawning Activity

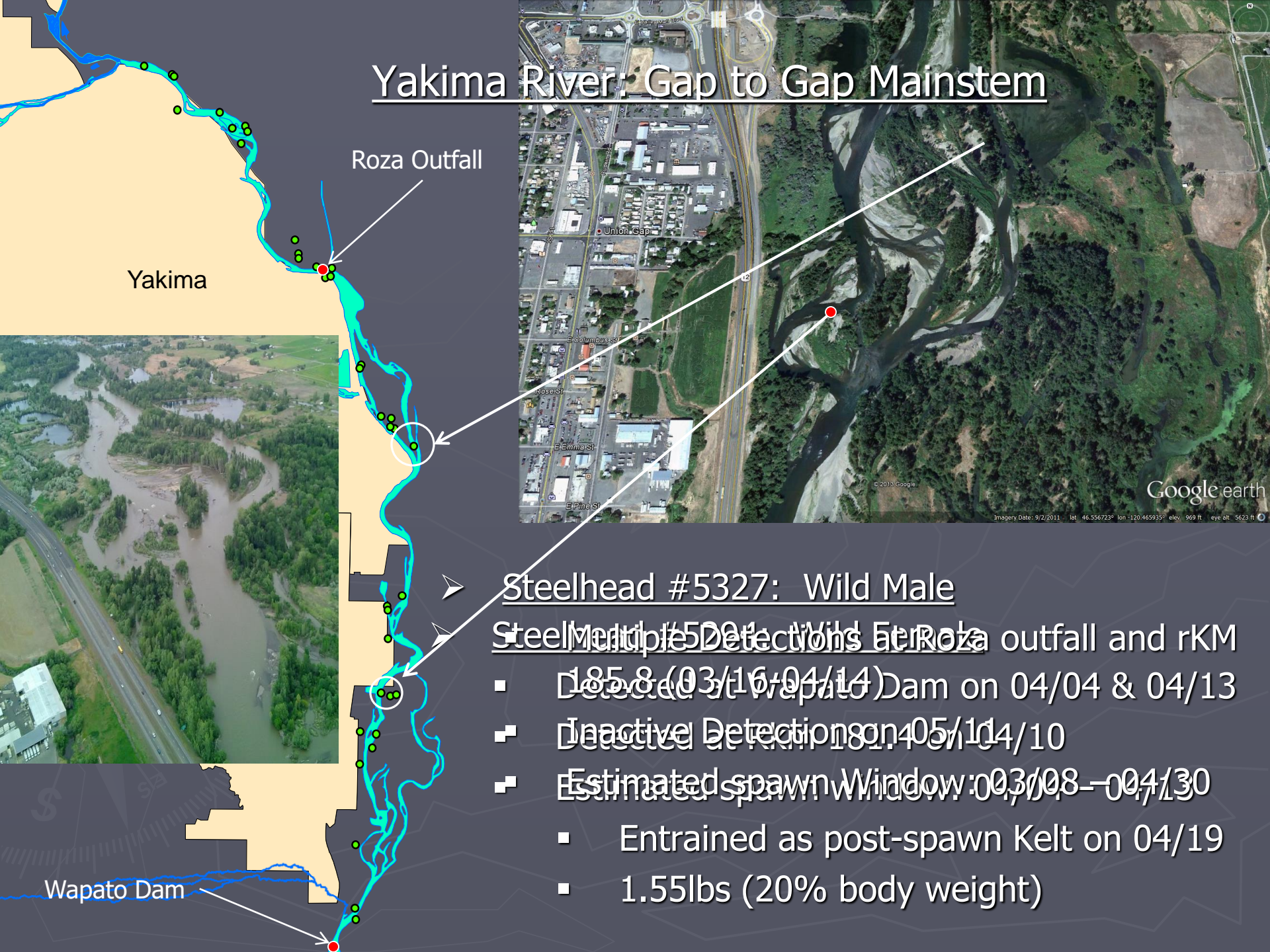
Year	2012	2013	2014*
# radio tagged	3	6	3
# fish	~40	~55	~26
% of population	1.8%	3.4%	1.7%

Middle Yakima Genetics

Middle Yakima: Gap to Gap



Yakima River: Gap to Gap Mainstem



Yakima

Roza Outfall

Steelhead #5327: Wild Male

Steelhead #5327: Multiple Detections at Roza outfall and rKM

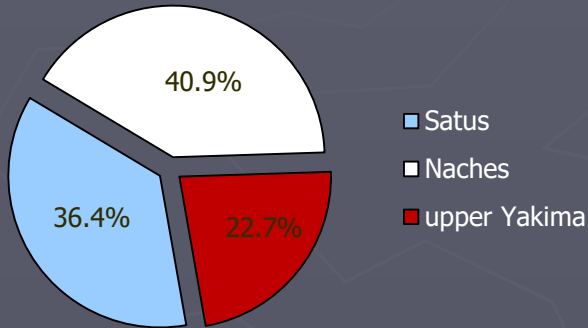
- Detected at Wapato Dam on 04/04 & 04/13
- Inactive Detections on 05/14/10
- Estimated spawn Window: 03/08–04/30
 - Entrained as post-spawn Kelt on 04/19
 - 1.55lbs (20% body weight)

Wapato Dam

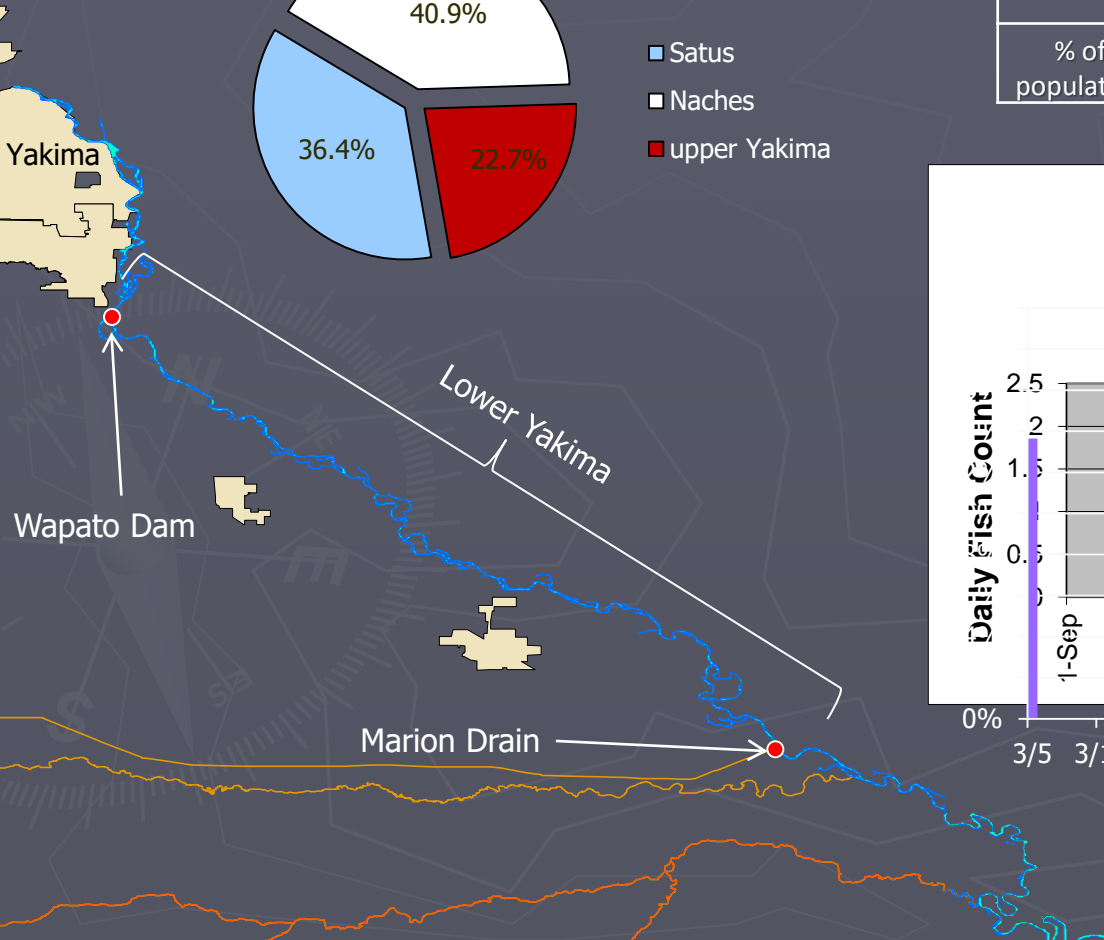
Lower Yakima River: Below Wapato Dam

➤ Spawning Activity

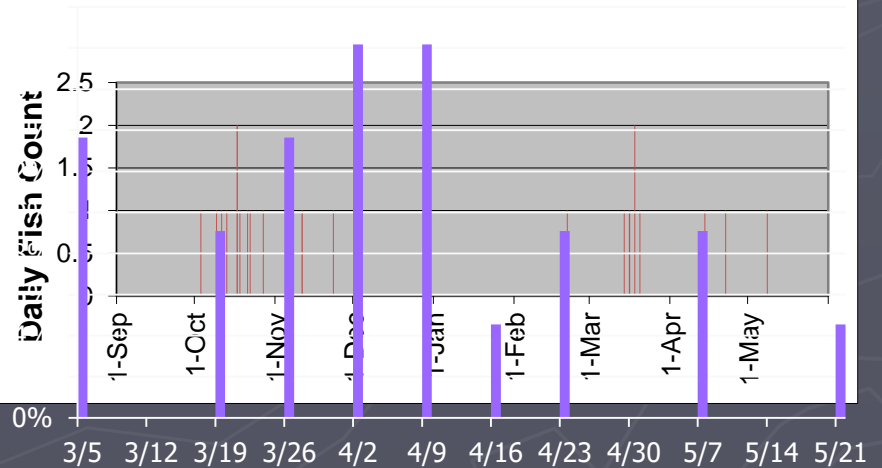
Lower Yakima Genetics 2012-13



Year	2012	2013	2014*
# radio tagged	7	15	5
# fish	~93	~138	~42
% of population	4.3%	8.1%	2.8%

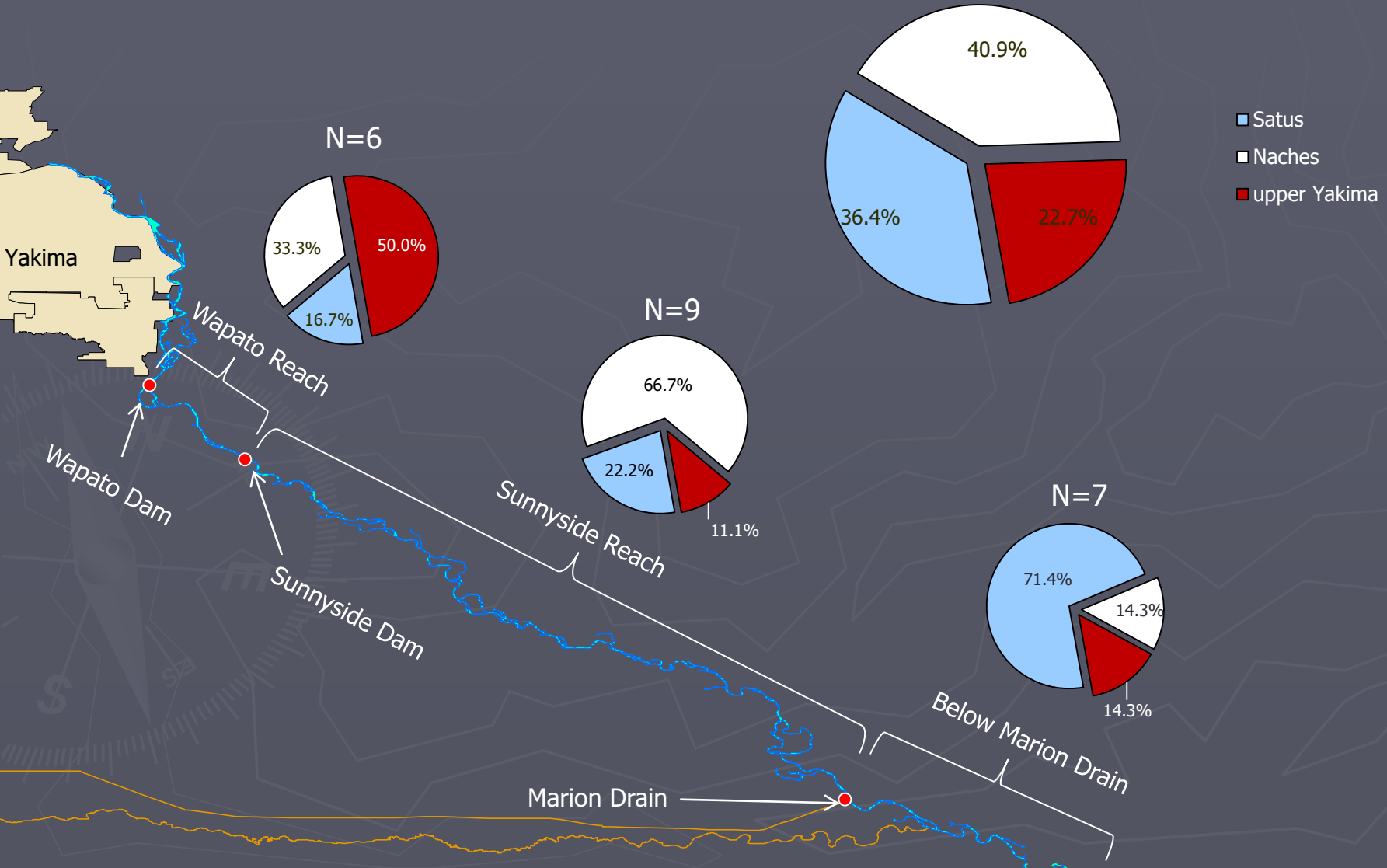


Lower Yakima: Spawning Activity Below Wapato Dam



Lower Yakima River: Below Wapato Dam

Lower Yakima Genetics 2012-13



Yakima Mainstem Below Wapato Dam

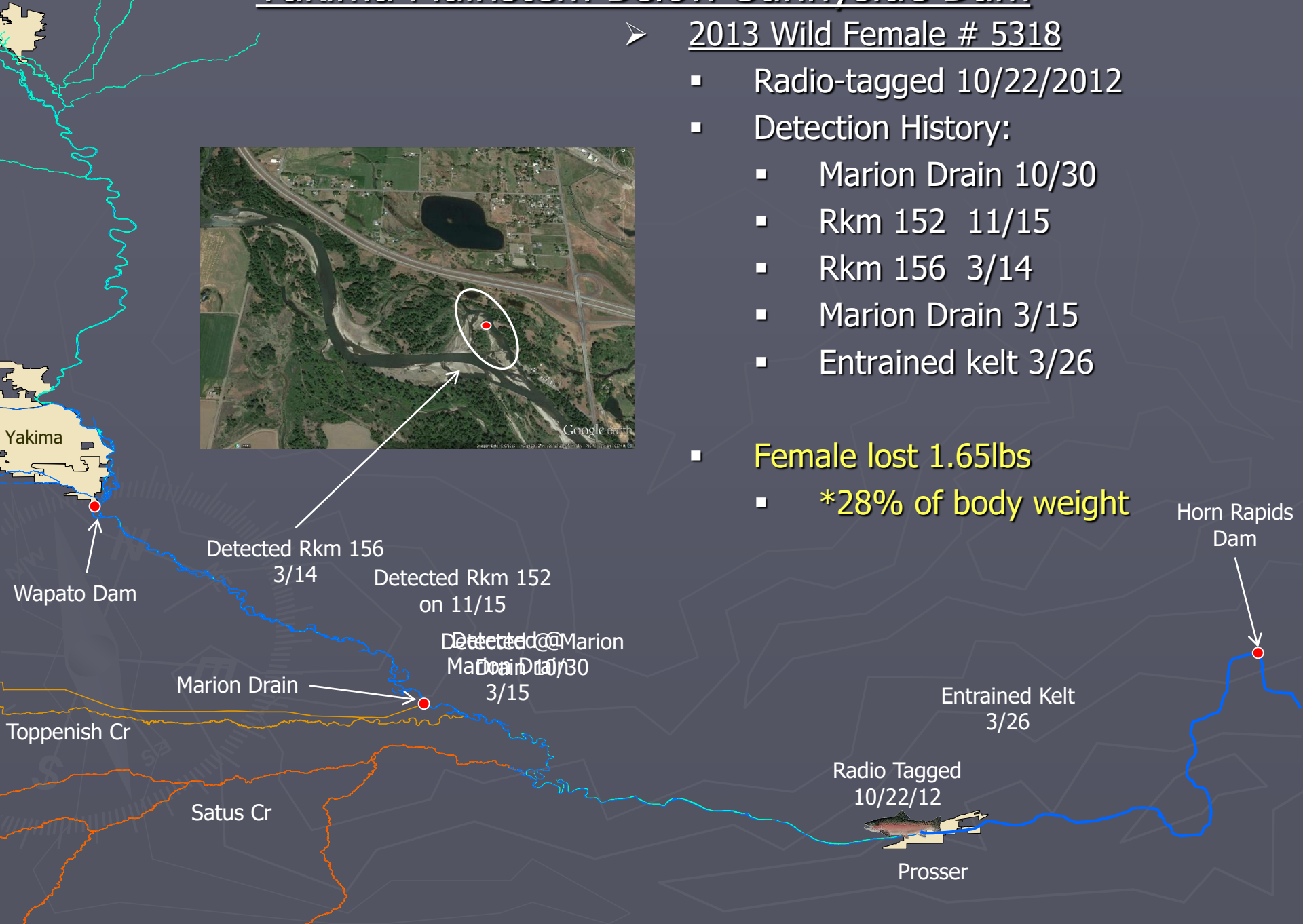
2013 Wild Female # 5279

- Radio-tagged 2/21/13
- Detection History:
 - Marion Drain 3/17
 - Near Wapato 3/20-3/29
 - Marion Drain 3/31
 - Prosser 4/1
 - Horn RD 4/2
- Spawn window 9 days
- Downstream Migration 4 days



Yakima Mainstem Below Sunnyside Dam

- 2013 Wild Female # 5318
 - Radio-tagged 10/22/2012
 - Detection History:
 - Marion Drain 10/30
 - Rkm 152 11/15
 - Rkm 156 3/14
 - Marion Drain 3/15
 - Entrained kelt 3/26



- **Female lost 1.65lbs**
 - ***28% of body weight**

Questions?

Question for YOU-
Are steelhead spawning in the
Yakima Mainstem below Wapato
Dam?

