Lewiston Plateau GWMA
Overview of the Ground Water Studies

Kenneth W. Neely, Hydrology Supervisor, IDWR

October 19, 2017
Lindsay Creek GWMA
Changes 2006-2011

- >0.5 ft of change
- 1-5 ft of decline
- 9-12 ft of decline

Sections: K Neely
IDWR, 10/17
The Keys to Hydrologic Analyses

1. Ground water level trends
2. Ground water – surface water relationships
3. Rock chip analysis
4. Geologic cross sections
5. Field work
6. Unique data collection opportunities (LOID 5 pump test in early 2017)
7. Water quality and water chemistry testing
Water levels using E tape only
Water levels using E tape and transducers
Clearwater River Discharge near Spaulding and Monitoring Well 45
Rock Chip Analysis

LoID #5

Static Water Level: 706 to 723 ft below land surface

- Sweetwater
- Wanapum
- Grande Ronde
- Tgr2 (Wapshilla Ridge)
- Tgn1 (China Creek)
- Tgn1 (Downey Gulch)
- Tgr1 (Center Creek)

Well depths and elevations in feet

Lithologies based on well driller's report

Lithologic units based on rock chemistry

Water zones based on the well driller's report

Ken Neely, IDWR, Oct 2017
X Section 1

LOID 5
MW 19

Tammany Creek

Carlton

Saddle Mts

Sweetwater

Wanapum

Pottinger

Chukar Run

10 Mile Canyon

Tgr2

Tgn1

2.1 miles

2.2 miles

1.8 miles

Ken Neely, IDWR, May 2017

Explanation

Depth in feet
Elevation, feet above sea level
Geologic unit based on whole rock analysis
Steel casing (solid black), seal (yellow), perfs (hatch lines)
Lithologies from well driller’s report
Water-bearing zone
Static water level
Recharge area for the regional aquifer; Dip of rocks is steeper than the gradient of the Snake River.
Here’s what we know so far...

1. Saddle Mountains is stable but no more development.

2. Wanapum is declining 1.4-2.2 ft/yr. No more development.

3. Grande Ronde Regional in Subarea A has declined some in the last few years, but stable over the long run. Snake River source.

4. Upper Grande Ronde in Subarea A-1 may be stable or slightly declining. Clearwater River and/or Lapwai Creek – sources? Is additional development sustainable?

5. Ground water resources in Subarea B are a mystery. We only have 2 monitoring wells, no rock chip, no aquifer test data.