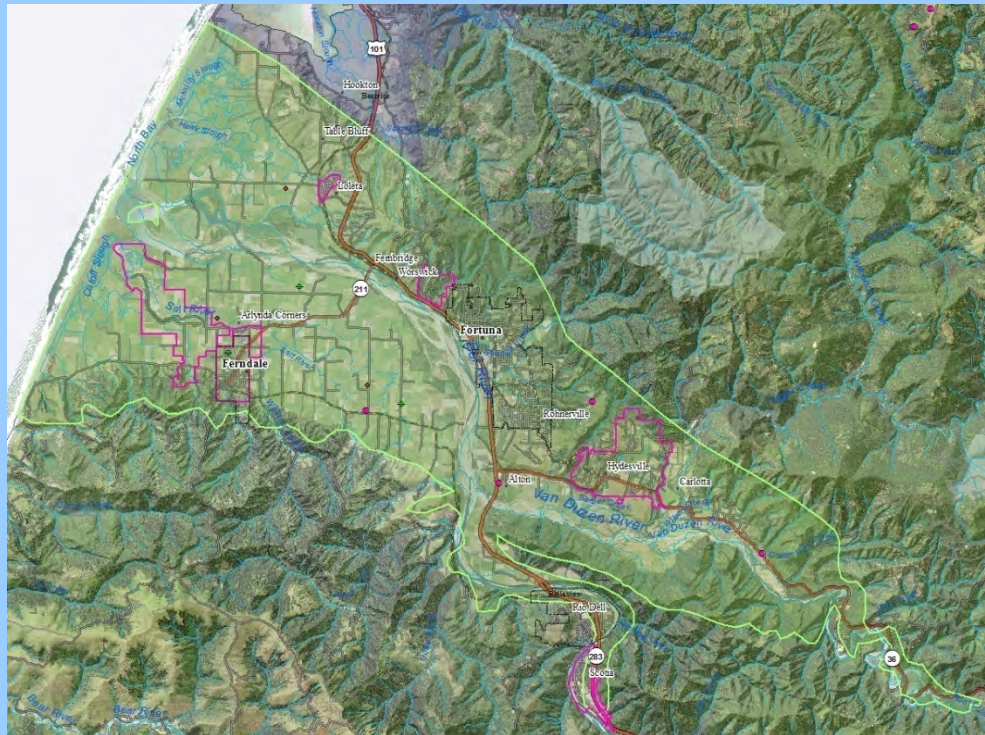


# Eel River Valley Groundwater Working Group

## Meeting No. 6

November 7, 2016 // 1:00 pm – 1:45 pm

*Humboldt County Agricultural Center*



# Today's agenda

1. Introductions
2. Brief review of previous meeting and current compliance approach
3. Update on technical study
4. Set next meeting date



November 7, 2016

## 2. Brief review of previous meeting and current compliance approach



November 7, 2016

# Eel River Valley Groundwater Working Group

## **Stakeholders**

- Agricultural producers
- Municipal water suppliers
- Environmental interests
- Domestic users
- Well drillers and equipment suppliers
- Local agencies
- State/federal regulatory agencies
- General public

## **Conditions for being a Working Group Member**

1. Agree to Working Group's purpose and scope
2. Pledge to attend at least half of meetings
3. Agree to follow meeting ground rules

## **Benefits of being a Working Group Member**

1. We acknowledge your representation of a stakeholder interest
2. We will actively solicit your input



# Working Group – Updated Purpose/Scope (Sept. 12, 2016)

**Purpose:** Guide the local response to the Sustainable Groundwater Management Act

1. Provide information and viewpoints regarding groundwater issues in the Eel River Valley.
2. Support the collection and analysis of technical data and information to understand conditions and trends.
3. Discuss selection and formation of a Groundwater Sustainability Agency (GSA), if applicable.
4. Discuss the framework and sustainable management criteria for an Alternative Submittal or future Groundwater Sustainability Plan (GSP).

**Scope:** The scope of the Working Group is limited to the Eel River Valley.



# Eel River Valley Groundwater Working Group

## Working Group Members (as of Sept. 12, 2016)

|                   |                    |                    |                  |                  |                 |
|-------------------|--------------------|--------------------|------------------|------------------|-----------------|
| Ben Dolf          | Dave Fisch         | Frances Tjarnstrom | John Vevoda      | Merritt Perry    | Tom Gast        |
| Bob McPherson     | Dave Rodrigues     | Jay Russ           | Joseph Alexandre | Michael Wheeler  | Tracy Boobar    |
| Brad Job          | Denver Nelson      | Jeff Dolf          | Katherine Ziemer | Patrick Sullivan | Troy Hubner     |
| Chad Lake         | Doreen Hansen      | Jeff Stackhouse    | Kevin Farmer     | Ryan Rice        | Yana Valachovic |
| Cheryl Laffranchi | Emily Afriat-Hyman | Jill Demers        | Lee Mora         | Stuart Dickey    |                 |
| Clif Clendenen    | Estelle Fennell    | John Corbett       | Marcus Drumm     | Summer Daugherty |                 |

**Interested Parties:** Anyone else who desires to attend and participate or follow developments



# State groundwater policy established by the Sustainable Groundwater Management Act (2014)

**Water Code Section 113:** It is the policy of the state that groundwater resources be managed sustainably for long-term reliability and multiple economic, social, and environmental benefits for current and future beneficial uses. Sustainable groundwater management is best achieved locally through the development, implementation, and updating of plans and programs based on the best available science.

**Sustainable groundwater management:** the management and use of groundwater in a manner that can be maintained during the planning and implementation horizon without causing undesirable results

**Undesirable results** means one or more of the following effects caused by groundwater conditions occurring throughout the basin: [*next slide*]



# Six Sustainability Indicators

|   |   |
|---|---|
| 1 | Chronic lowering of groundwater levels indicating a significant and unreasonable depletion of supply                                      |
| 2 | Significant and unreasonable reduction of groundwater storage   |
| 3 | Significant and unreasonable seawater intrusion   |
| 4 | Significant and unreasonable degraded water quality   |
| 5 | Significant unreasonable land subsidence  |
| 6 | Depletions of interconnected surface water that have significant and unreasonable adverse impacts on beneficial uses of the surface water |



# SGMA compliance – three potential pathways

1. DWR changes prioritization level of Eel River Valley groundwater basin from Medium to Low
  - DWR’s ranking system discussed at December 14, 2015 meeting
  - 8 criteria; currently 2.82 points above medium-priority threshold
  - Improved data to be collected on irrigated acreage, groundwater reliance
2. Alternative Submittal
  - Need to demonstrate basin has been managed sustainably for last 10 years (no undesirable results)
  - Prop. 1 technical studies will determine if evidence supports finding
  - Due January 1, 2017; would require five-year updates
  - “Local agency” can make submittal; GSA not required
3. Groundwater Sustainability Agency / Sustainability Plan
  - GSA required to prepare, adopt, implement a GSP
  - GSAs need to be established by June 30, 2017 (Plans due January 2022)

CALIFORNIA CODE OF REGULATIONS  
TITLE 23. WATERS  
DIVISION 2. DEPARTMENT OF WATER RESOURCES  
CHAPTER 1.5. GROUNDWATER MANAGEMENT  
SUBCHAPTER 2. GROUNDWATER SUSTAINABILITY PLANS

**§ 358.2. Alternatives to Groundwater Sustainability Plans**

- (c) An Alternative submitted to the Department shall include the following information:
- (1) An Alternative submitted pursuant to Water Code Section 10733.6(b)(1) shall include a copy of the groundwater management plan.
  - (2) An Alternative submitted pursuant to Water Code Section 10733.6(b)(2) that is not an adjudicated area described in Water Code Section 10720.8 shall include the following:
    - (A) Information demonstrating that the adjudication submitted to the Department as an Alternative is a comprehensive adjudication as defined by Chapter 7 of Title 10 of Part 2 of the Code of Civil Procedure (commencing with Section 830).
    - (B) A copy of the proposed stipulated judgment.
  - (3) An Alternative submitted pursuant to Water Code Section 10733.6(b)(3) shall provide information that demonstrates the basin has operated within its sustainable yield over a period of at least 10 years. Data submitted in support of this Alternative shall include continuous data from the end of that 10-year period to current conditions.
- (d) The entity submitting an Alternative shall explain how the elements of the Alternative are functionally equivalent to the elements of a Plan required by Articles 5 and 7 of this Subchapter and are sufficient to demonstrate the ability of the Alternative to achieve the objectives of the Act.

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An aerial photograph of a river basin. A red line outlines the entire basin, which includes a large area of green fields (irrigated acreage) and a winding river. The text in the upper right corner provides data on irrigated acreage from two different sources: RCD (2016) and DWR (2015).

## Irrigated Acreage

RCD (2016): Approx. 14,022 ac.

DWR (2015): 33,309 ac.

(Total basin area: 73,700 ac.)

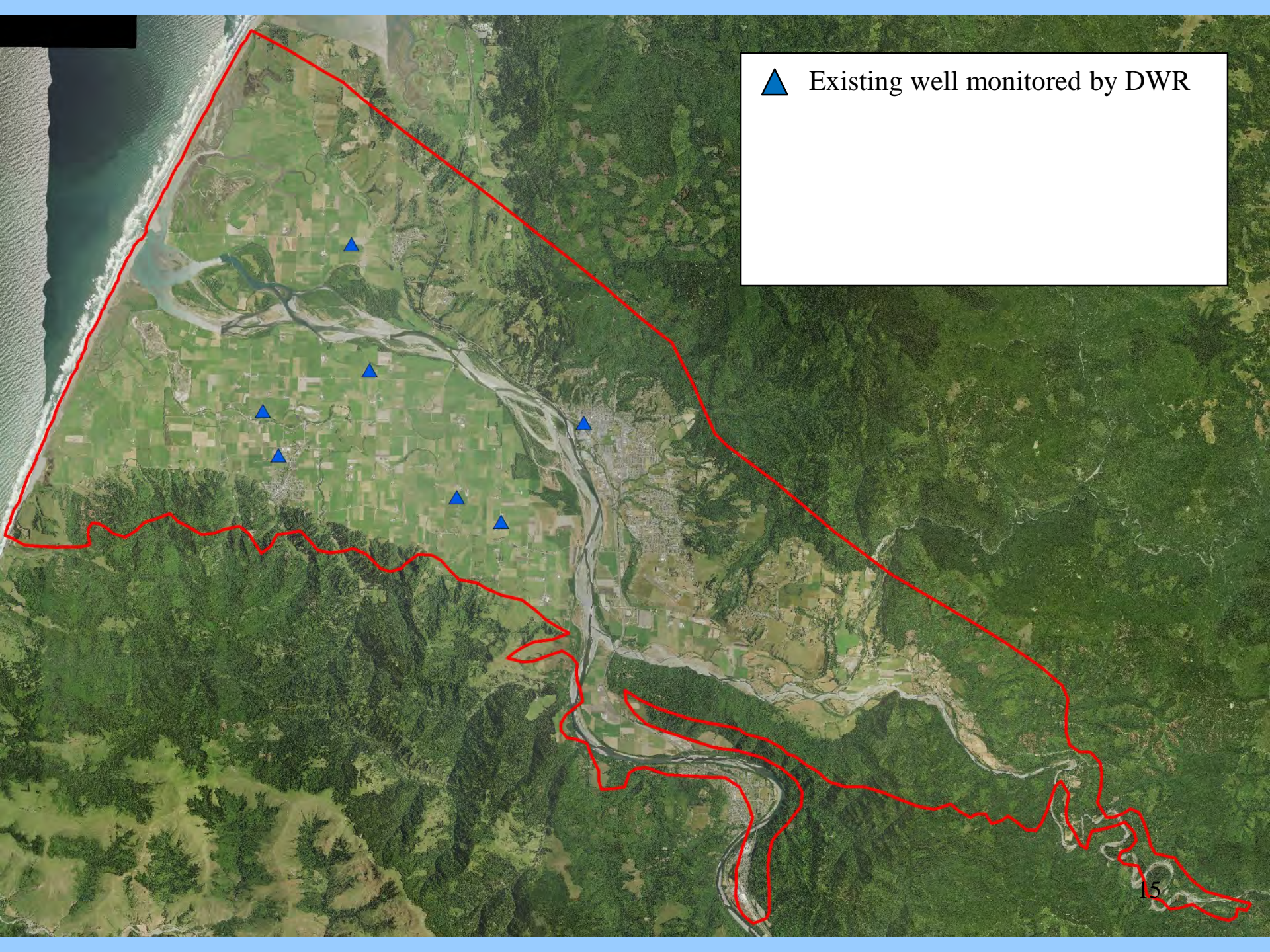
# 3. Update on Technical Study



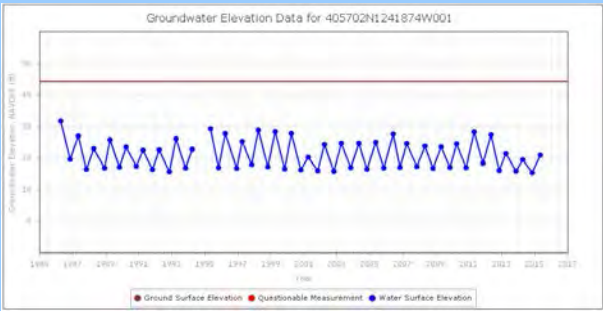
November 7, 2016



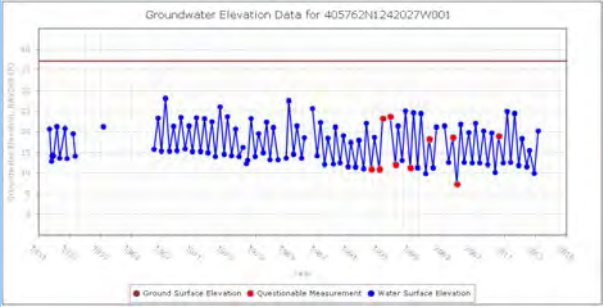
▲ Existing well monitored by DWR



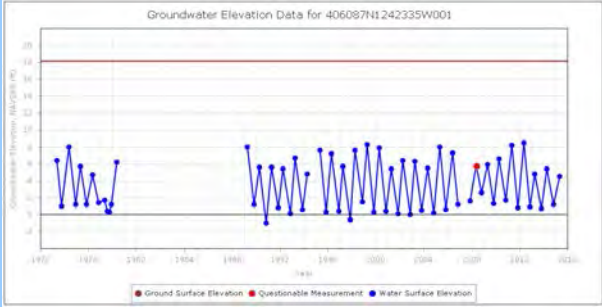
# DWR Monitoring Wells in Eel River Basin



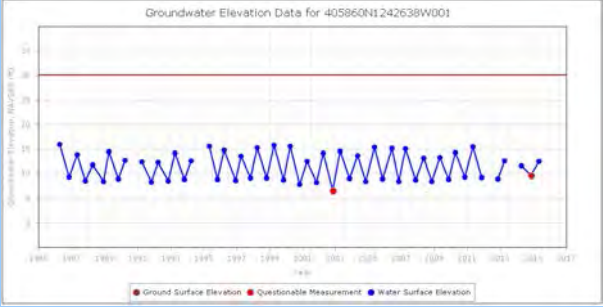
**Pleasant Point Road  
(Ferndale)**



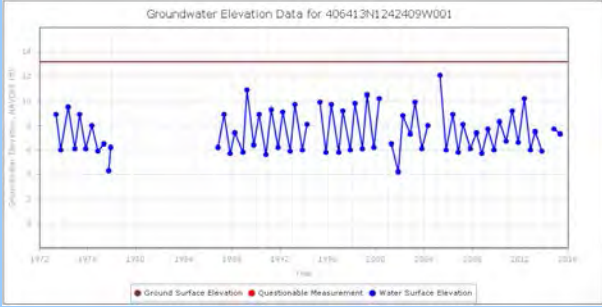
**Waddington Road  
(Ferndale)**



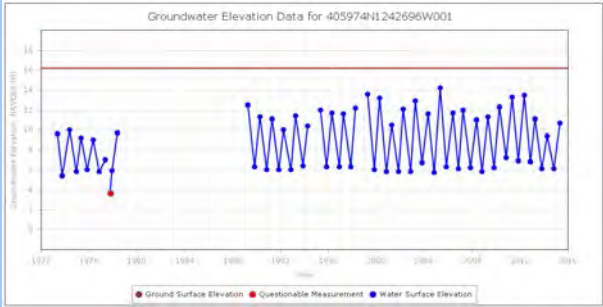
**Goble Lane  
(Ferndale)**



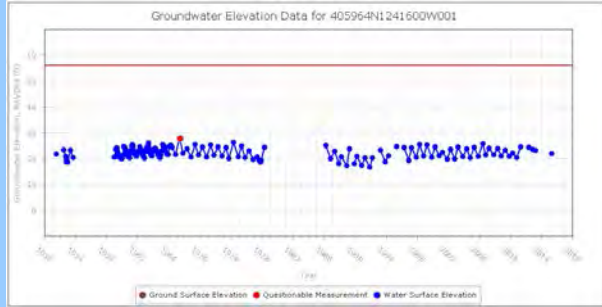
**County Fairgrounds  
(Ferndale)**



**Cannibal Island  
Road (Loleta)**

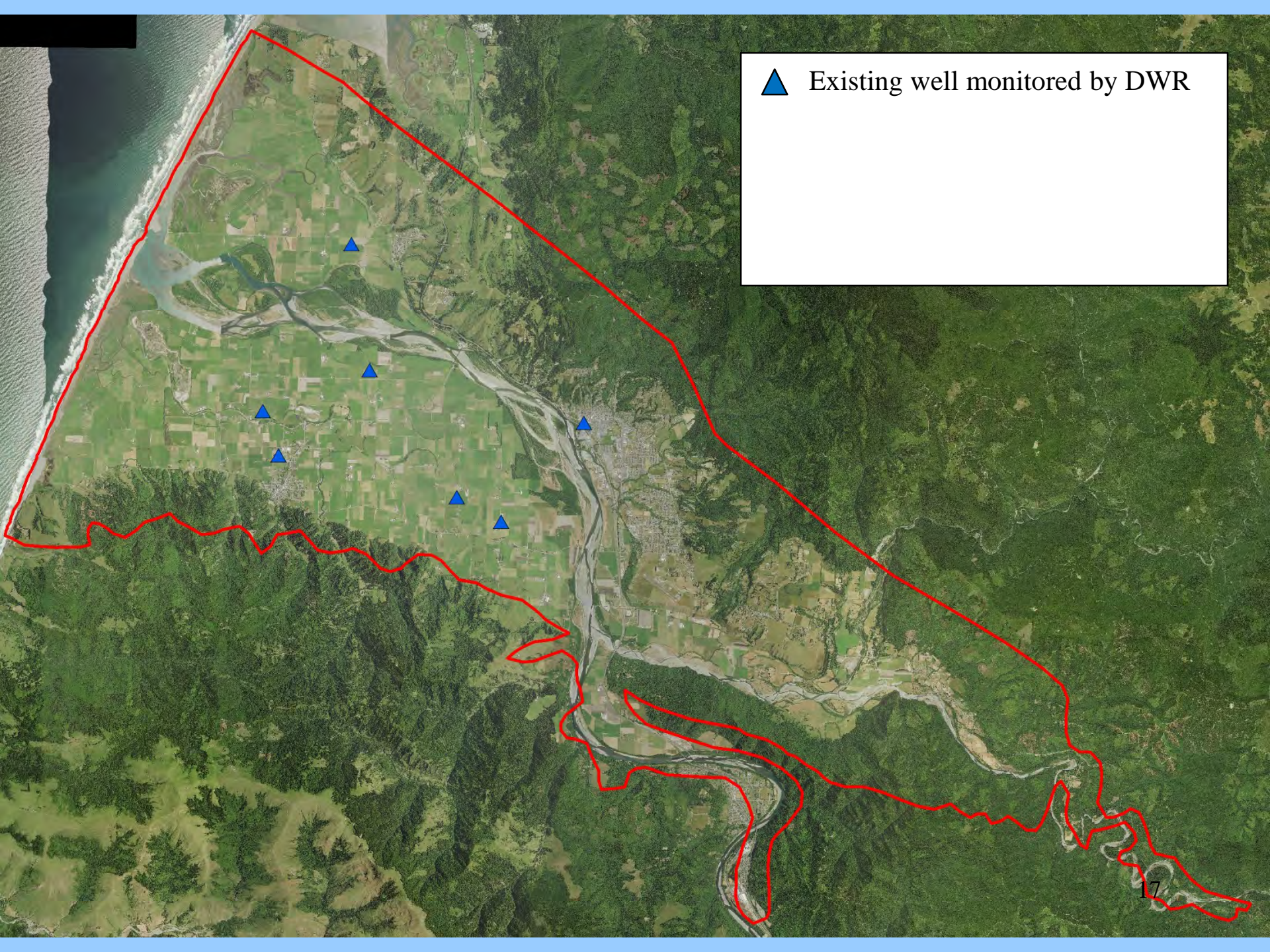


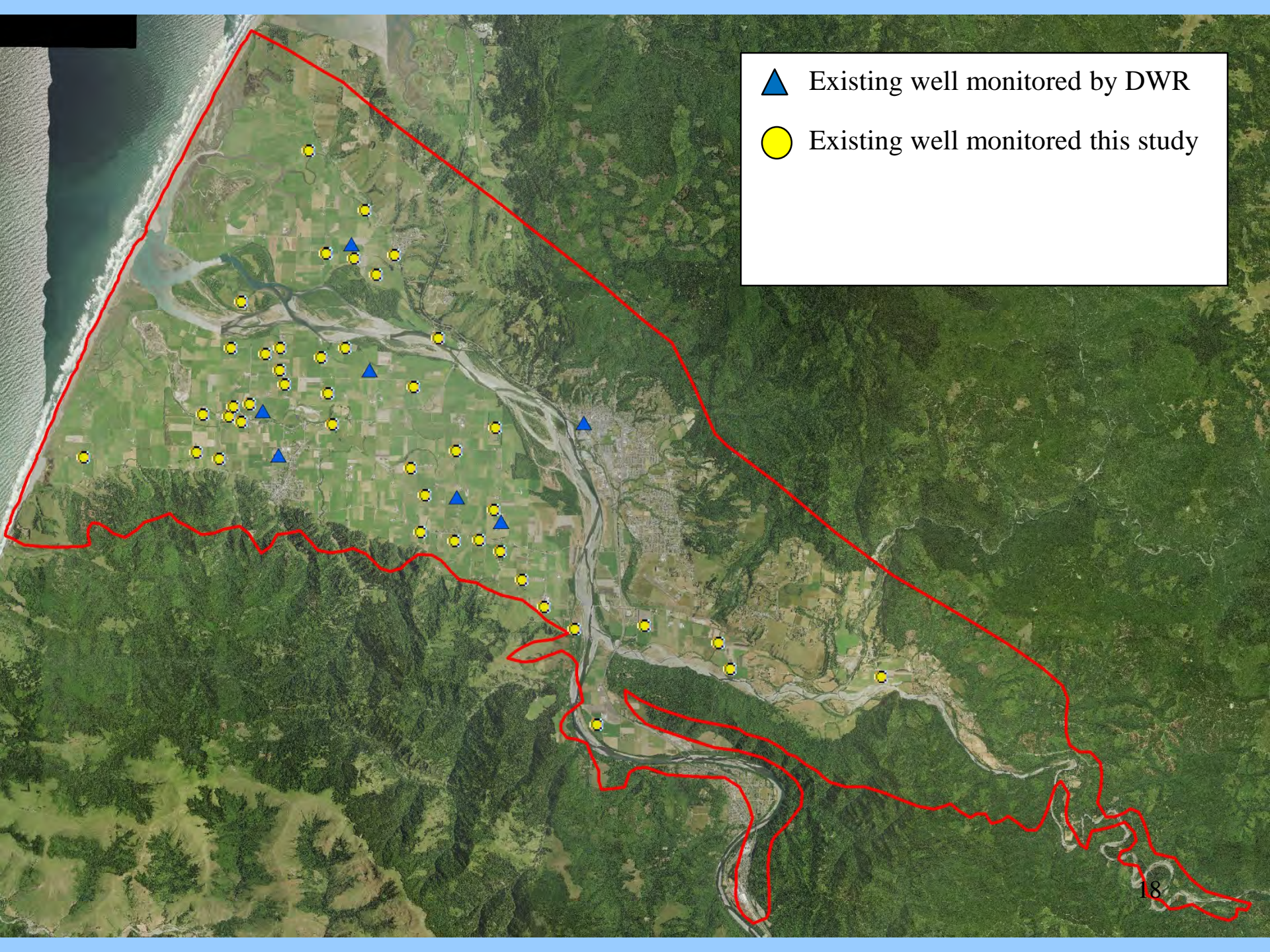
**Dillon Road  
(Ferndale)**



**7<sup>th</sup> and K St.  
(Fortuna)**

▲ Existing well monitored by DWR





- ▲ Existing well monitored by DWR
- Existing well monitored this study

# Expanded Groundwater Monitoring Network



## Wells monitored late Oct./early Nov. 2016:

- 43 existing wells owned by residents and producers
- 7 existing wells normally monitored by DWR
- 10 Humboldt Creamery wells
- 9 newly installed wells
- Several municipal wells

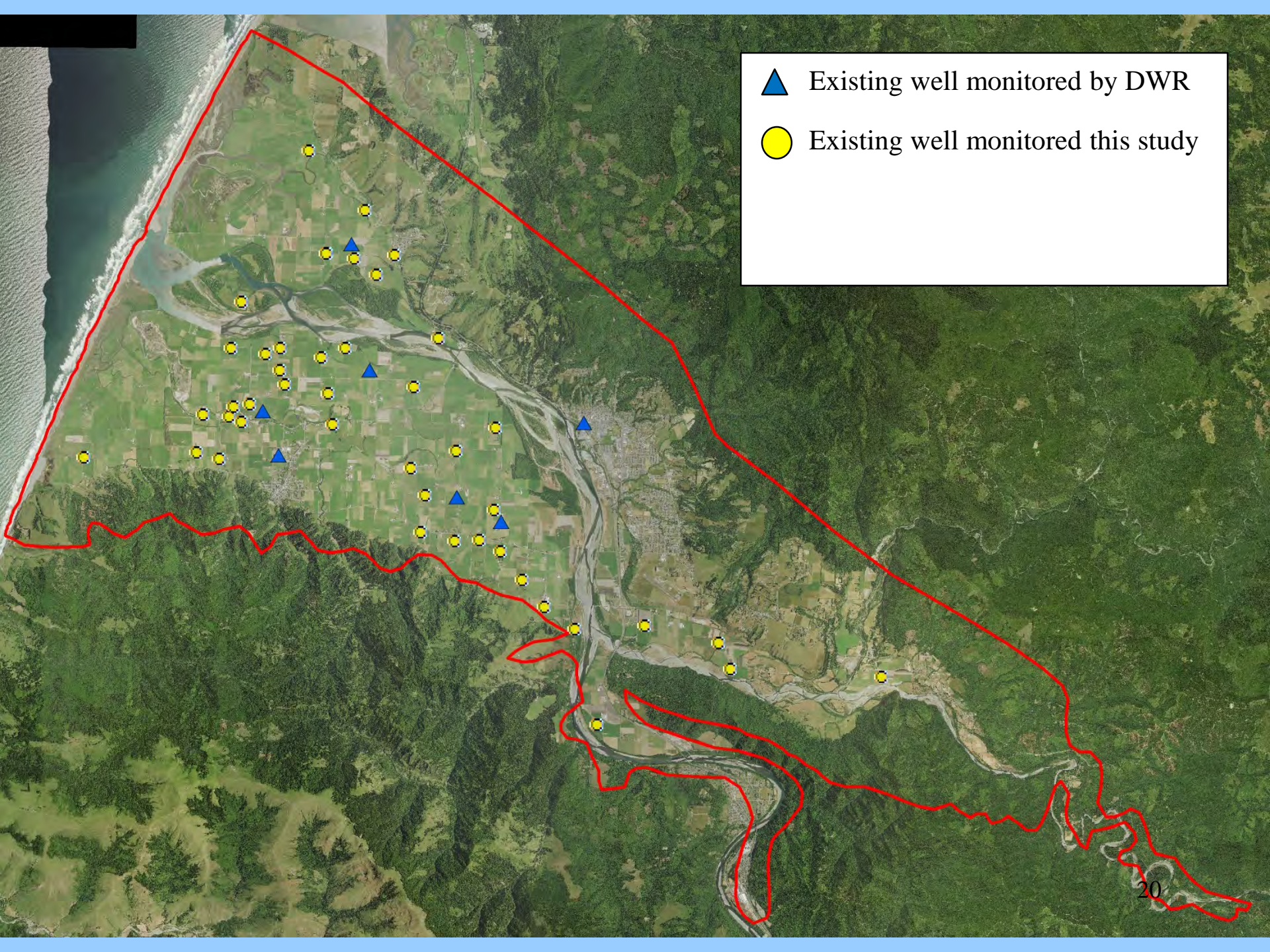


## Thank you to:

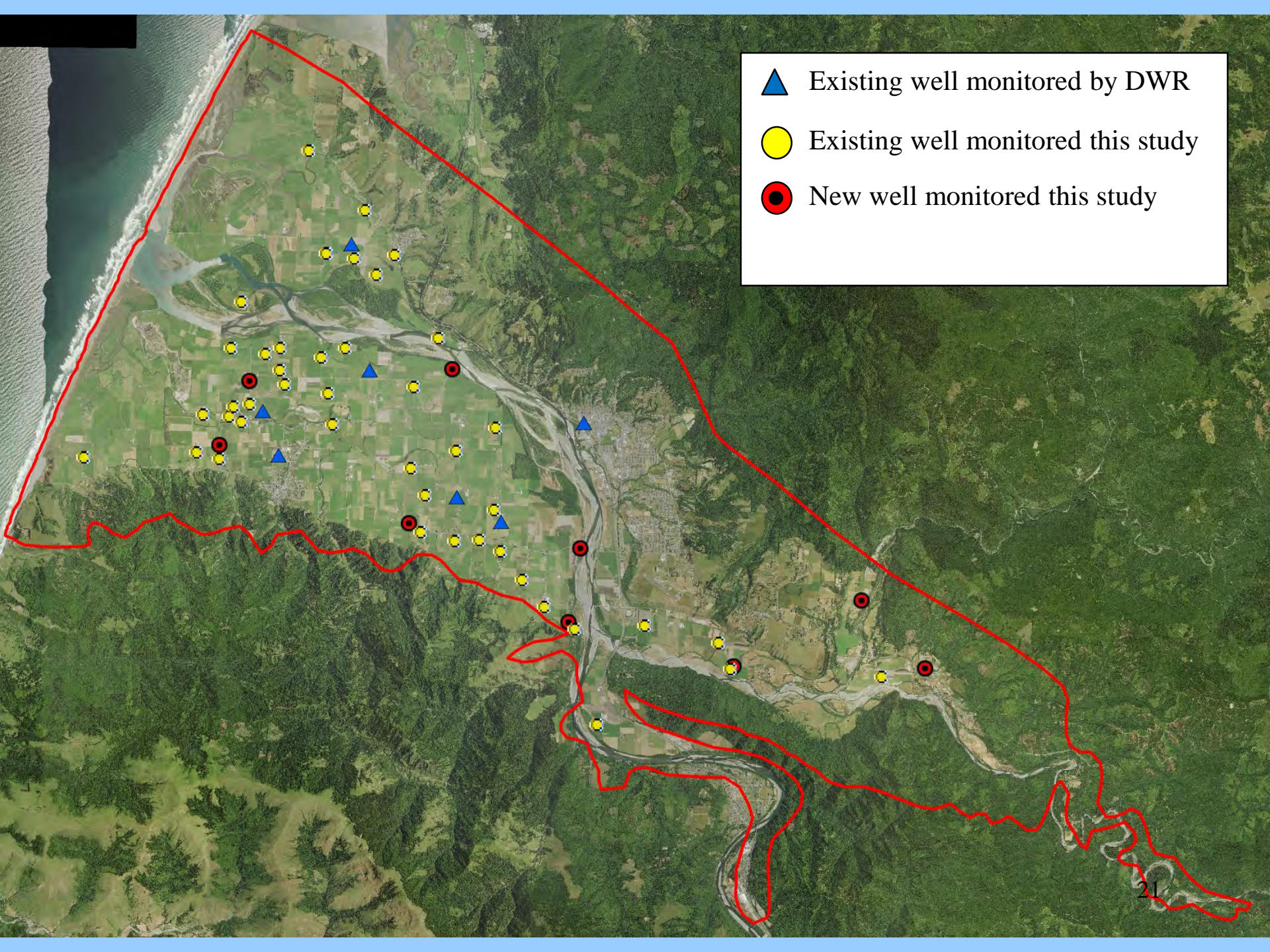
- Landowners
- Cheryl and Don Laffranchi
- Humboldt County RCD
- Humboldt County Farm Bureau
- Municipal water suppliers
- SHN
- DWR



November 7, 2016



- ▲ Existing well monitored by DWR
- Existing well monitored this study



- ▲ Existing well monitored by DWR
- Existing well monitored this study
- New well monitored this study

# New Groundwater Wells



- Three deep wells with mud rotary drilling rig
- Down to 240 feet below ground surface
- Two of the wells have nested screens (one shallow/one deep)
- Will provide information on connectivity of shallow and deep groundwater, and saltwater intrusion



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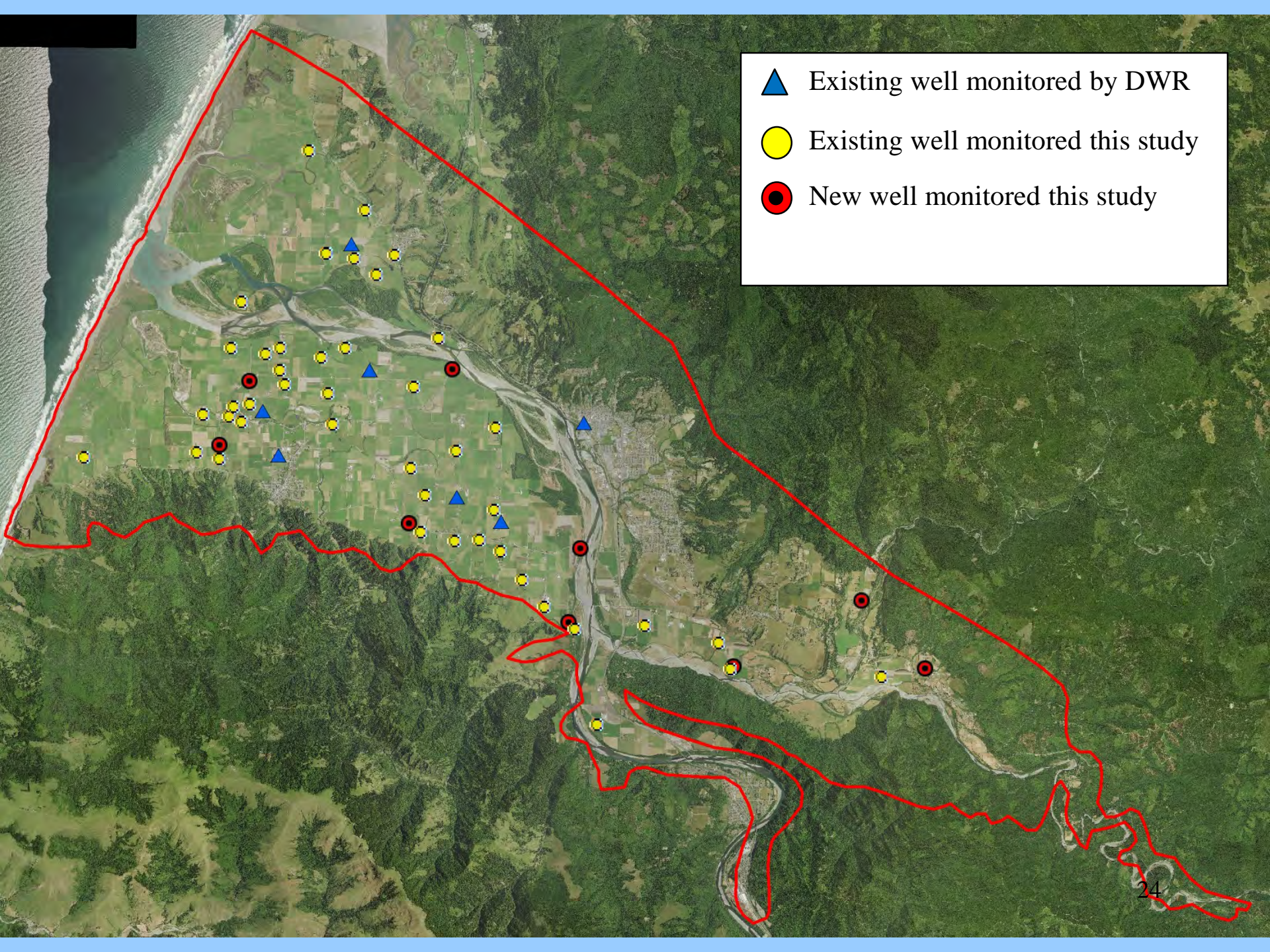
# New Groundwater Wells



- Six shallow wells with GeoProbe (direct push)
- Down to 60 feet below ground surface
- Four of the six wells have nested screens (one shallow/one deep)
- Will provide information on groundwater/surface water connectivity, spatial distribution of groundwater levels, vertical gradients

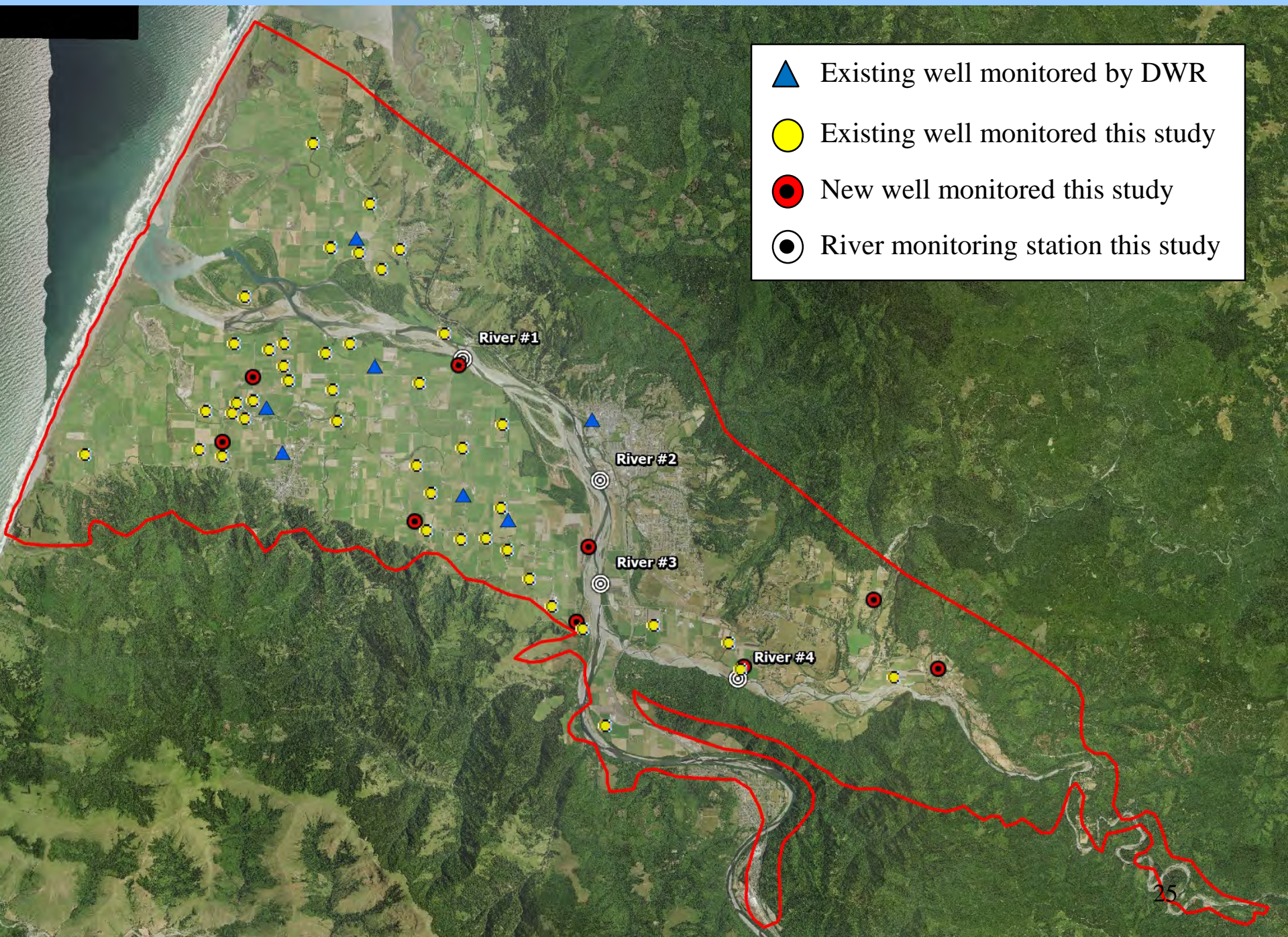


November 7, 2016



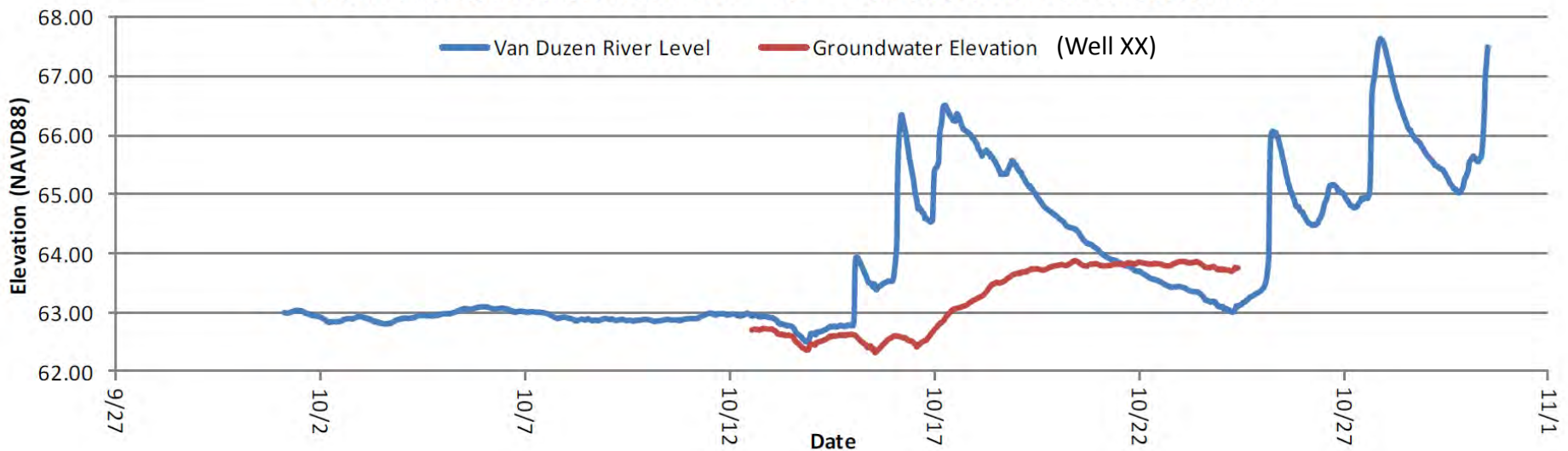
- ▲ Existing well monitored by DWR
- Existing well monitored this study
- New well monitored this study

- ▲ Existing well monitored by DWR
- Existing well monitored this study
- New well monitored this study
- ◎ River monitoring station this study



# Example of Paired Groundwater/Surface Water Data Collection

## Van Duzen Surface Flow - vs - Groundwater Elevation

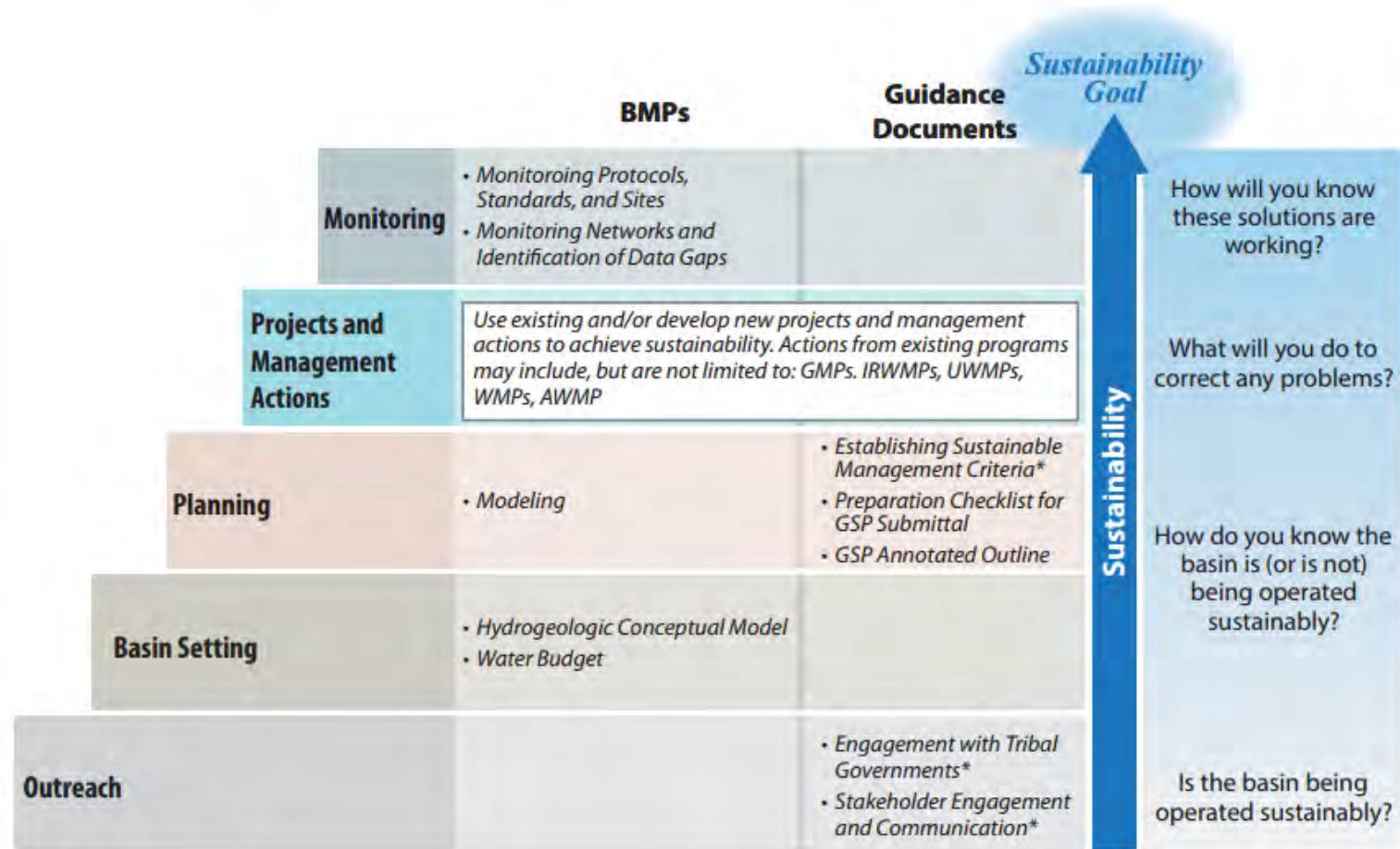


Results from the Fall 2016 data collection  
and preliminary analysis will be presented  
at the next meeting




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Figure 1. Steps to Sustainability and related BMPs and Guidance Documents



\* In Development



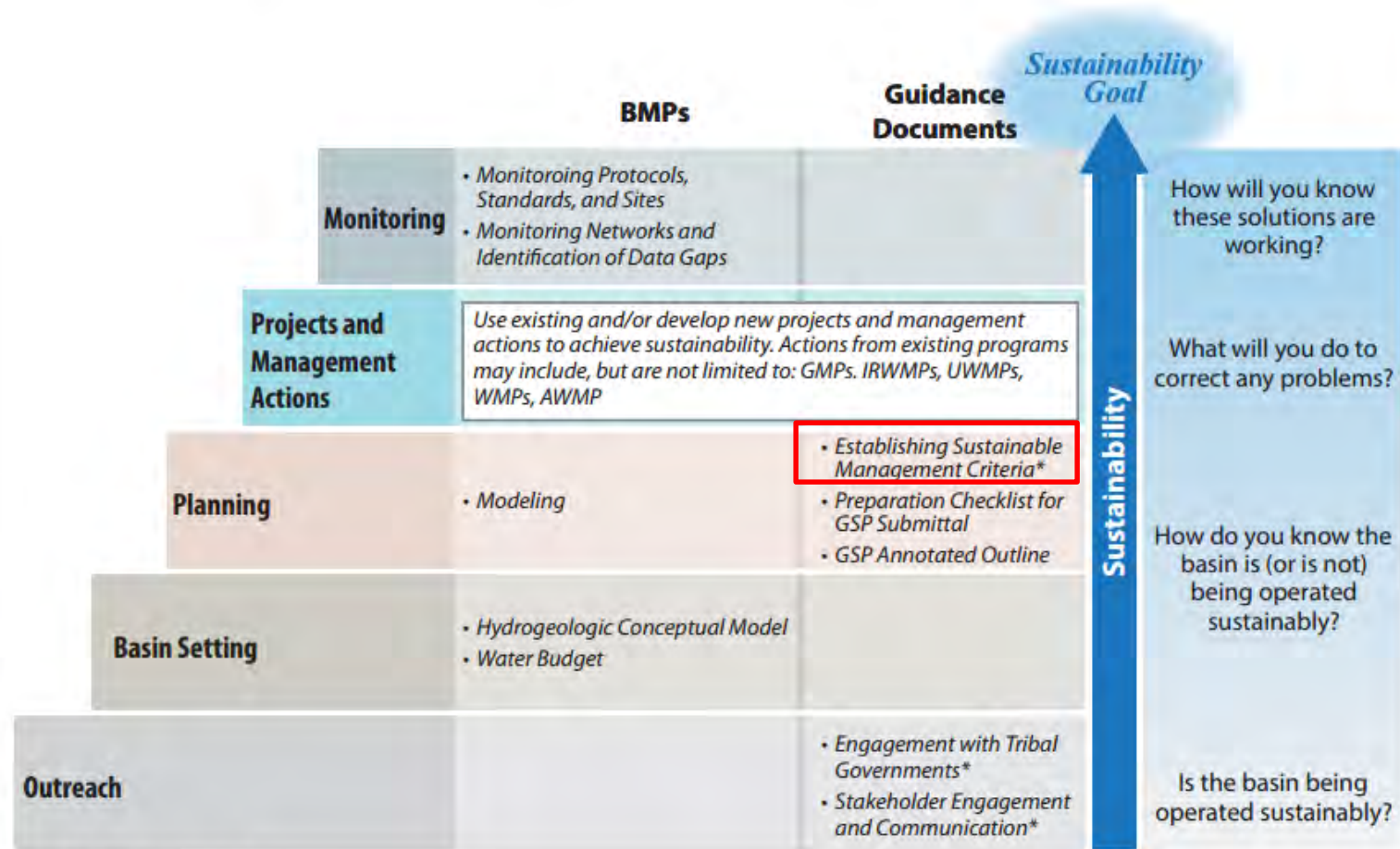
California Department of Water Resources  
Sustainable Groundwater Management Program

**DRAFT**

October 2016


## Best Management Practice Framework

Figure 1. Steps to Sustainability and related BMPs and Guidance Documents



\* In Development

**DRAFT**



California Department of Water Resources  
Sustainable Groundwater Management Program

October 2016

**Best Management Practice Framework**

# Eel River Valley Groundwater Basin Assessment

| Task   | 2016 |      |      |     |      |     |     |     | 2017 |     |     |     |     |      |
|--|------|------|------|-----|------|-----|-----|-----|------|-----|-----|-----|-----|------|
|  | May  | June | July | Aug | Sept | Oct | Nov | Dec | Jan  | Feb | Mar | Apr | May | June |
| 1 Compilation of Existing Data and Previous Studies            | █    | █    | █    | █   | █    |     |     |     |      |     |     |     |     |      |
| 2 New Data Collection  |      |      |      |     |      |     |     |     |      |     |     |     |     |      |
| 2.1 Exploratory borings  |      |      |      |     | █    | █   |     |     |      |     |     |     |     |      |
| 2.2 Surface water/groundwater monitoring                       |      |      |      |     |      | █   | █   | █   | █    | █   | █   | █   |     |      |
| 2.3 Pump tests   |      |      |      |     |      |     |     |     |      |     |     |     |     |      |
| 2.4 Surface water flow measurements                            |      |      |      |     |      |     |     |     |      |     |     |     |     |      |
| 2.5 Irrigation pump estimation                                 |      |      |      |     |      |     |     |     |      |     |     |     |     |      |
| 2.6 Water levels and chloride testing                          |      |      |      |     |      |     |     |     |      |     |     |     | █   | █    |
| 3 Conceptualization of Hydrogeology and River-Aquifer Exchange |      |      |      | █   | █    | █   | █   | █   | █    | █   | █   | █   | █   |      |
| 4 Water Balance  |      |      |      |     |      |     |     |     |      |     |     |     |     |      |
| 5 Stakeholder Involvement / Initial Management Planning        | █    | █    | █    | █   | █    | █   | █   | █   | █    | █   | █   | █   | █   |      |
| 6 Grant Administration   | █    | █    | █    | █   | █    | █   | █   | █   | █    | █   | █   | █   | █   | █    |

Updated: September 12, 2016

January 1, 2017: Alternative Submittal

- Potential need for update or amendment to Alternative Submittal after January 1, 2017
- Potential need for County to apply to become GSA by June 30, 2017, as contingency



November 7, 2016

## 4. Set next meeting date

Information will be posted at

[www.humboldt.gov.org/groundwater](http://www.humboldt.gov.org/groundwater)



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