Faulder Community Water Conservation Plan

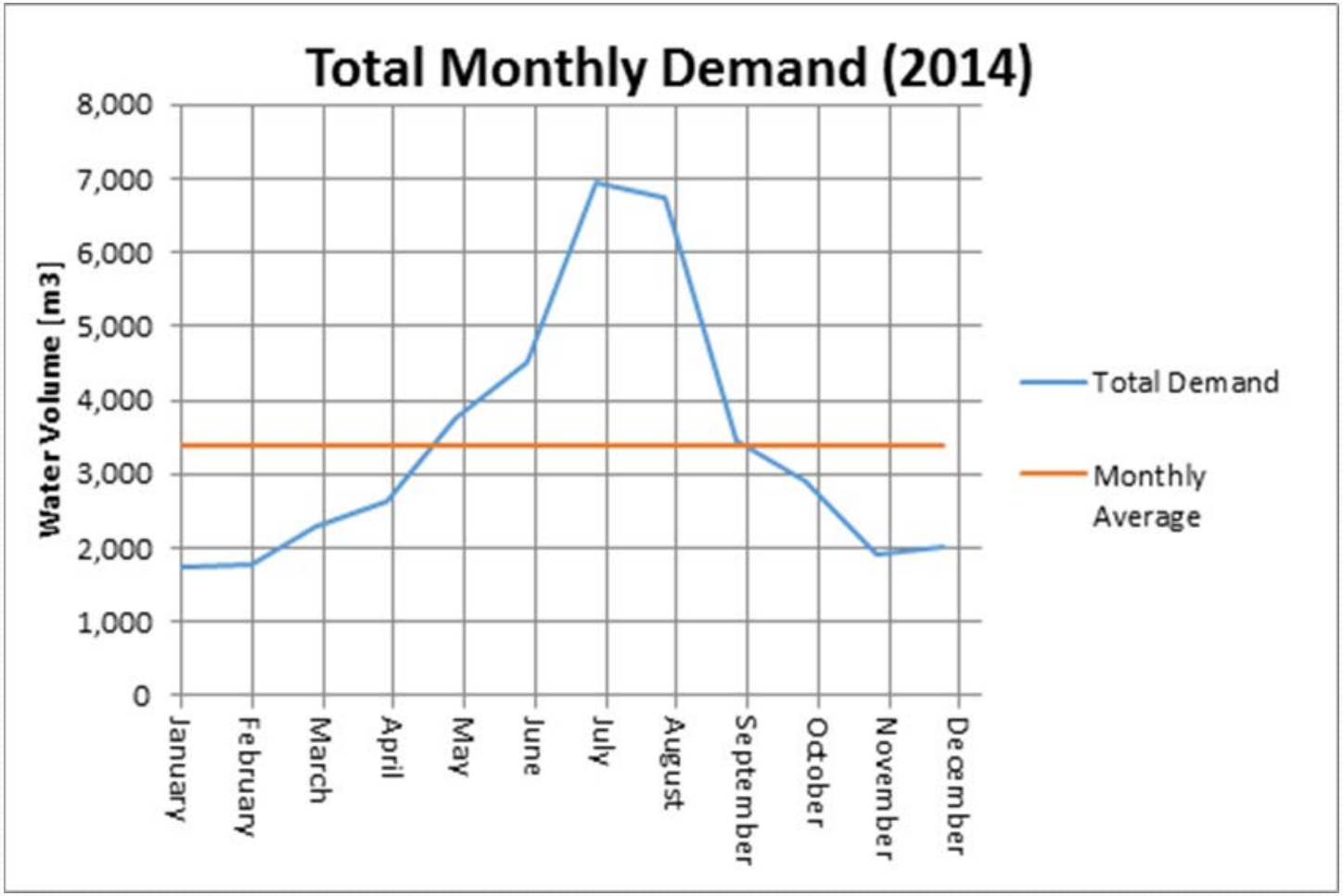
A strategic plan for conserving both water and the associated electricity related to its production, delivery and use. The goals of the plan are:

- Conserve water to ensure a reliable and sustainable supply
- Reduce cost for end users
- Eligibility when applying for infrastructure grants
- Assist in the implementation of policies and strategies for the different levels of government

"With more and more people, balancing the water needs of the environment, drinking water, crop irrigation and other outdoor watering, tourism and recreation, industry, and cultural values is increasingly difficult. Climate change is expected to increase the frequency of drought and flood events in the Okanagan due to warmer, wetter winters, and longer, hotter, drier summers" (Okanagan Basin Water Board, 2008)

- **Meadow Valley aquifer has irregular recharge rates**
- **Conservation measures will help ensure supply in the long term**

Faulder's 2014 Water Consumption



- The WCP will benefit the Faulder Water System by:
  - Reductions in peak day consumption
  - Reductions in annual water use
  - Reductions in variable costs from pumping and treatment
  - Improvements in the understanding of water use and conservation in the community
  - Improved water accounting, ability to project accurate water rates and design effective water conservation programs
  - Reductions in energy consumption for water supply
  - Sustainability of water supply from the Meadow Valley aquifer

Water Conservation Measures

- **Targeted reduction of 30% by 2025**
- Water Conservation Plan includes:
  - Leak detection/monitoring
  - Infrastructure Upgrades
  - Indoor and outdoor kits/retrofits
  - Xeriscaping
  - Rain capture/storage
  - Climate change monitoring/adaptation
  - Public outreach
  - Regulatory measures
  - Feasibility study for the introduction of water meters
  - Continuation of the Water Ambassador program and other related water conservation programs

From these plans the RDOS strives to meet goals that include:

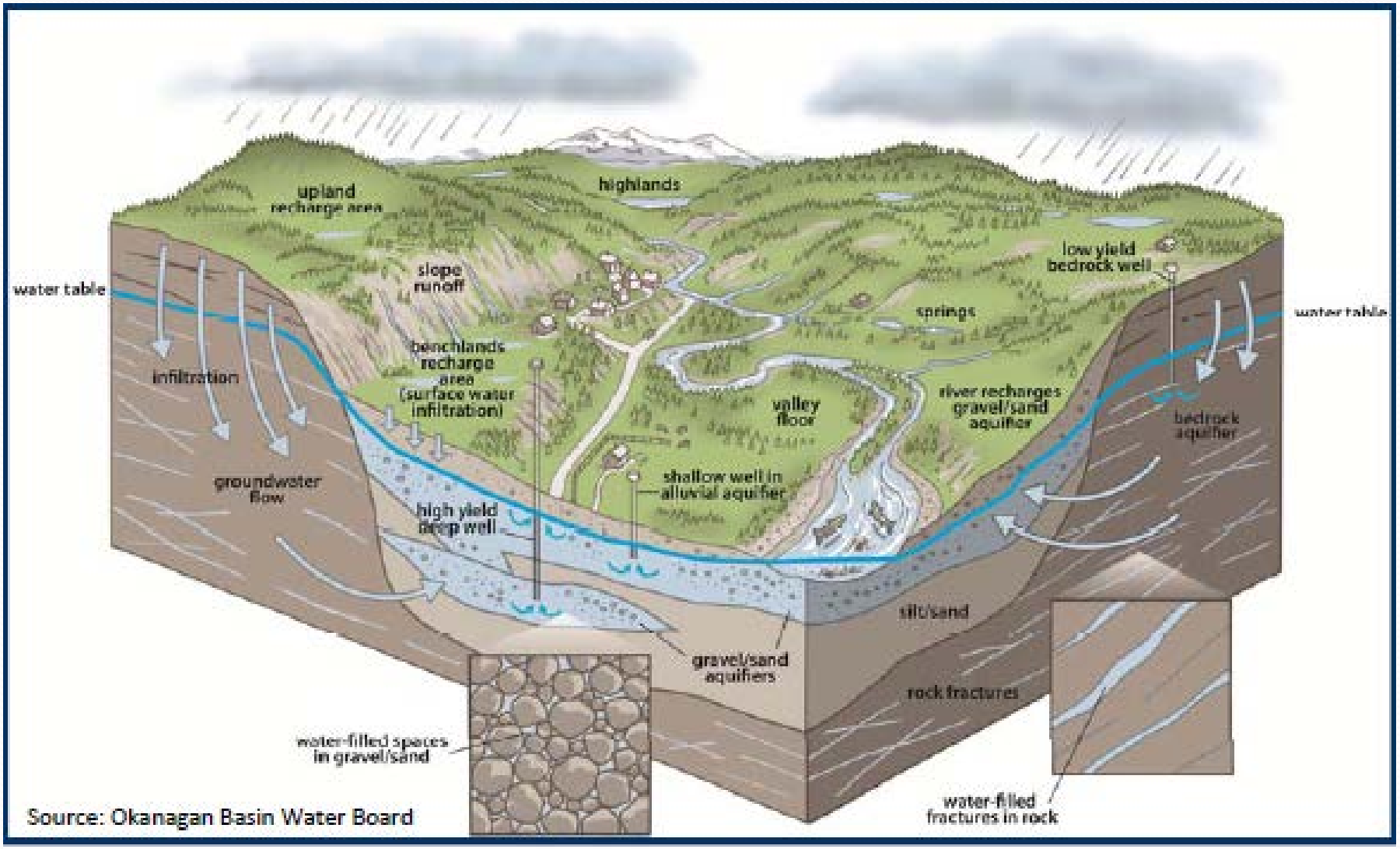
- Working towards a goal of improving water use efficiency by 30% by 2025
- Working with residents to implement water saving measures
- Improving the ability to respond to a basin scale drought
- Reducing peak demand to ensure consistent water supply and pressures
- Monitoring changes in land use to help predict water supply requirements
- Reducing per capita indoor water use
- Encouraging water efficient landscaping
- Improving water accounting

Faulder Water System

Well Protection Plan

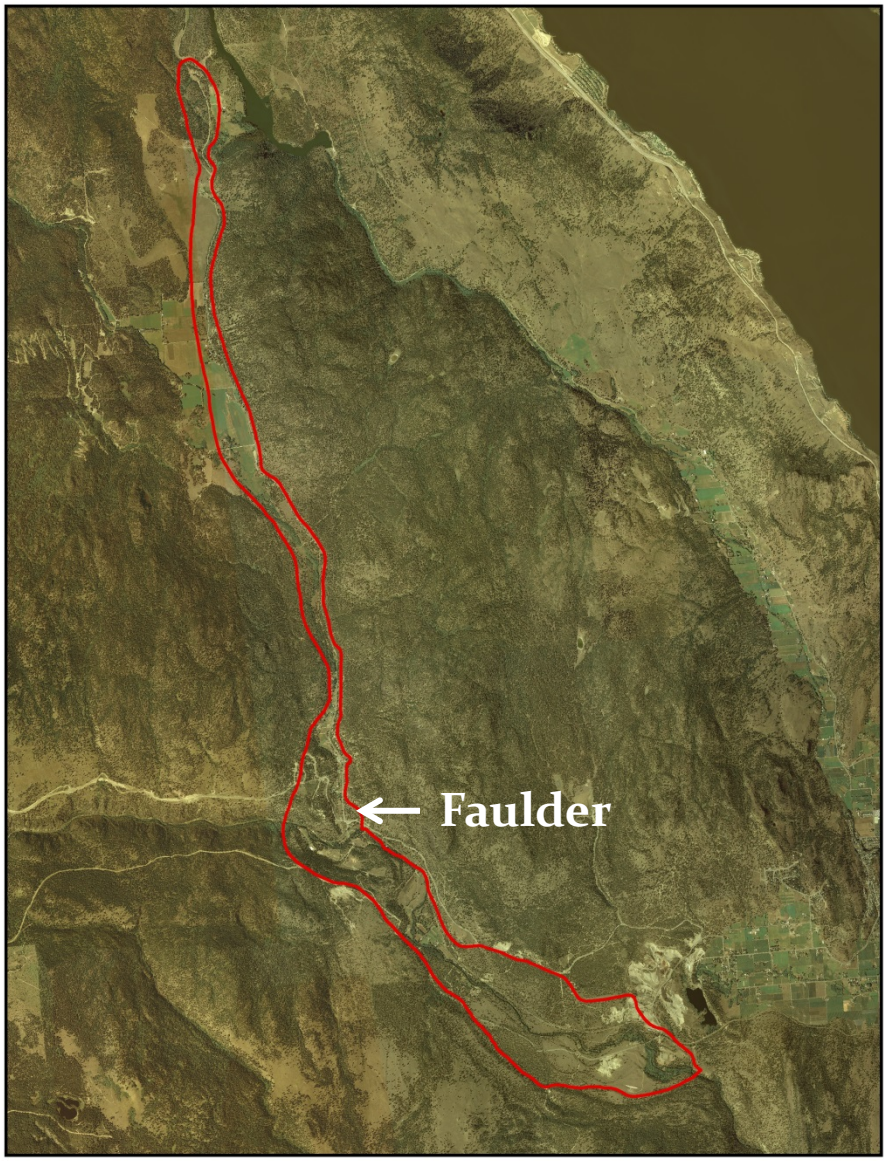
Introduction

- Meadow Valley Aquifer source protection
- A Well Protection Plan (WPP) contain practical measures to minimize and prevent impacts from land use activities
- Mitigation and identification of risks to the groundwater
- Groundwater is often cleaner and easier to protect than surface water sources
- Once an aquifer is contaminated it is difficult to remediate


upland
recharge area
highlands
water table
slope
runoff
low yield
bedrock well
springs
water table
infiltration
benchlands
recharge
area
(surface water
infiltration)
valley
floor
river recharges
gravel/sand
aquifer
bedrock
aquifer
groundwater
flow
shallow well in
alluvial aquifer
high yield
deep well
silt/sand
gravel/sand
aquifers
rock fractures
water-filled spaces
in gravel/sand
water-filled
fractures in rock
Source: Okanagan Basin Water Board

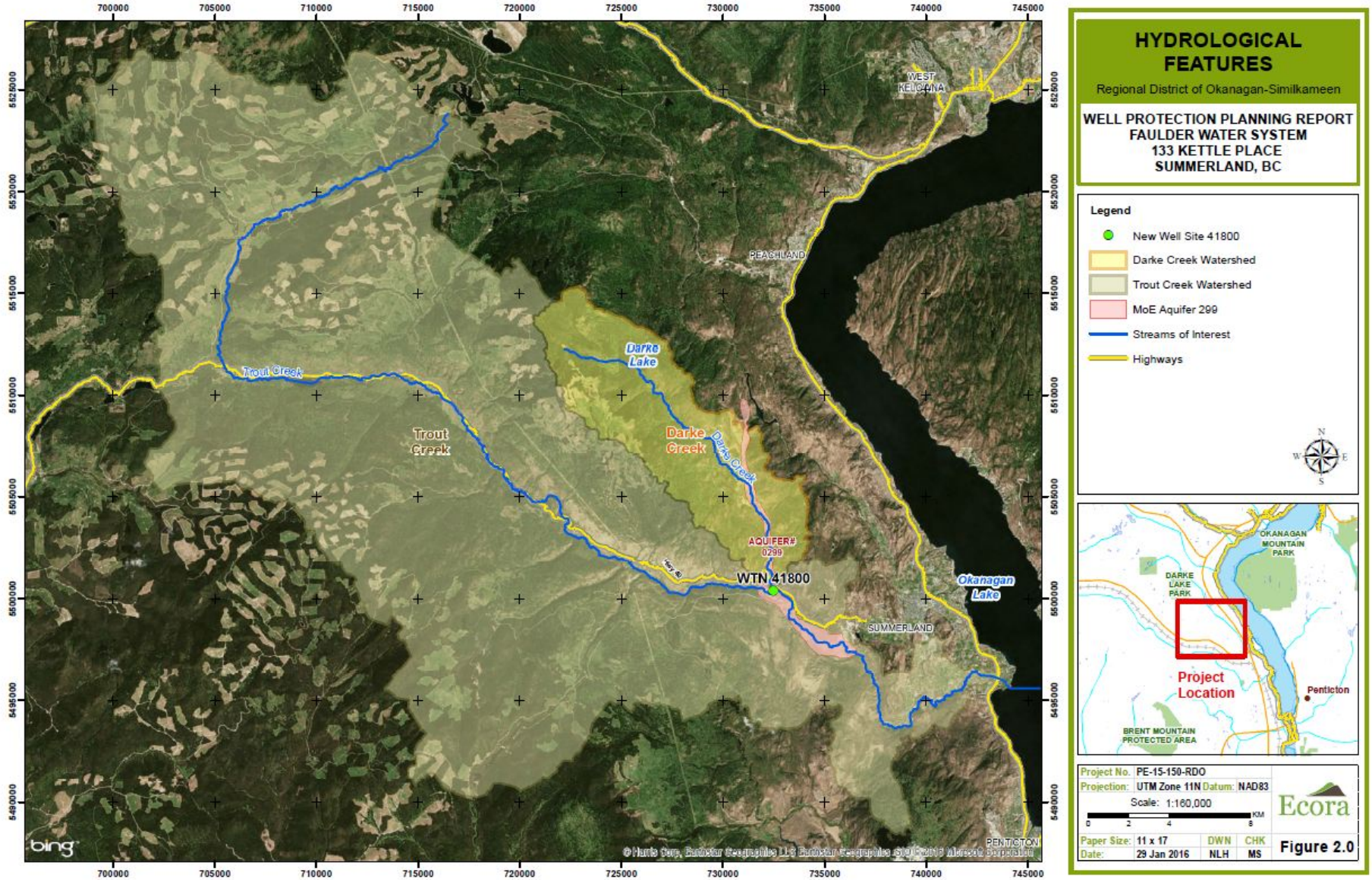
Well Protection Plan

- Developed for Meadow Valley aquifer
- Defines a Community Planning Team
- Identifies a specific area to protect (Well Protection Area)
- Identification of potential contaminants
- Management strategies and recommendations
- Community outreach and engagement

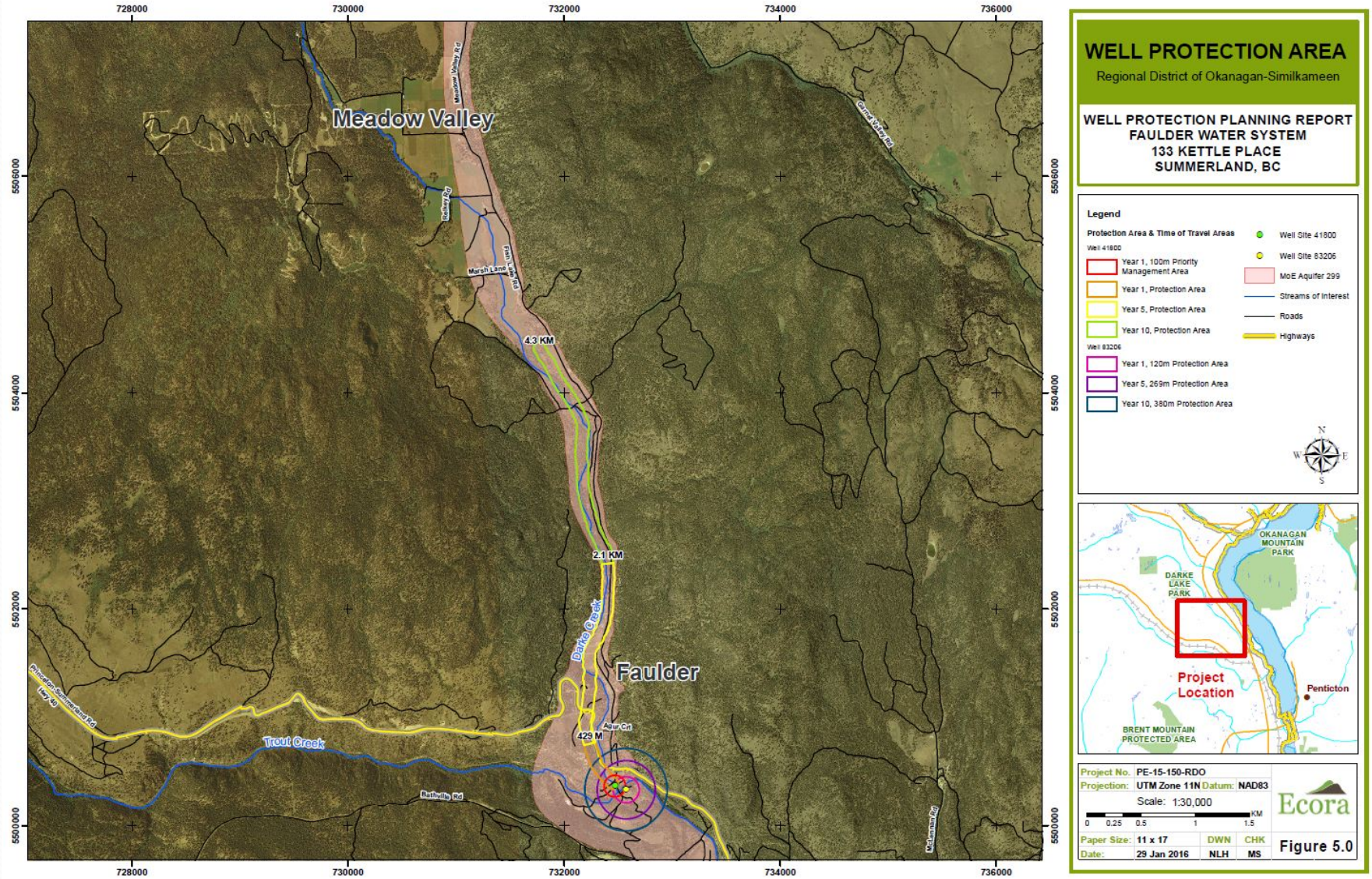


Meadow Valley Aquifer

Hydrological Features



Well Protection Areas



Identified Potential Contaminants

- Abandoned wells/wells with no surface seal
- Pesticides/fertilizers
- Livestock manure piles
- Septic tanks
- Illegal dumping
- Household dumping of chemicals down the drain
- Contamination to Darke/Trout Creek
- Vehicle accidents/spills on the KVR/Highway 40/Fish Lake Road

Protection & Mitigation Measures

- Protection measures include awareness of surface activities and how they can affect water quality
  - Modify activities with the health of the aquifer in mind
  - Notify the RDOS of incidences that may affect water quality
  - Maintaining wells/septic systems
  - Community involvement in implementing management strategies

Application of these measures are concentrated in the **Well Protection Area**

Goals implemented will help ensure long term use of water in the Meadow Valley aquifer

Community involvement will be the biggest help in achieving these goals!

Thank you!