The La Pine Basin as an Example

HB 3186

Contents

Doing Nothing Was Not an Option! What HB 3186 Does

Taking a step back to:

- Idenitify disadvantaged communities:
  - New concept for Oregon
  - Uses Iowa model
  - Mostly rural unincorporated communities
  - Allows a septic system upgrade variance
  - Does not force a disadvantaged community to install unaffordable systems
- Creates framework to adequately treat waste water within the community's financial means.
- Addresses environmental issues:
  - Does not remove responsibility to repair or maintain existing system.
- Does not ignore health issues
- Requires DEQ study:
  - Cost and Requirements:
    - Creation of a groundwater monitoring system
    - Plan to provide assistance to affected communities
    - Develop partnerships between public and private entities

The aggressive DEQ septic system agenda severely hurt the La Pine Basin:

- The agenda cost the taxpayer millions and has failed.
- Nothing in the law requires that DEQ consider economic harm to a community:
  - Homeowners lost their life savings and led some to just walk away.
  - When told the septic system had failed, one stated: ***Does this mean I will have to leave my home, because I cannot afford that [ATT].***
- The agenda led to misinformation, people believed septic systems harmed the environment and public health. Well water analysis failed to demonstrate harm.
- The agenda did not include a master plan:
  - No cross-agency involvement. Public health agencies were absent.
  - Environmental issues were raised yet the Oregon Rapid Wetland Assessment (ORWAP) was not consulted, a measure of river wetland health.
  - Cost-benefit analysis failed to balance affordability against community resources.
  - One resident testified: ***I believe that Deschutes County has avoided this approach because the data would not support their position from either a public health perspective or a cost-benefit perspective.***
- The La Pine Basin opposed this agenda:
  - Overturned by voter referendum a Deschutes County ordinance (local rule) that required blanket upgrades to ATT's.
  - One group filed a lawsuit over another county ordinance (Backdoor Local Rule) that required ATT upgrades for major septic repairs, new construction and remodels.
    - Successfully encouraged the BOCC to repeal the Backdoor Local Rule, then dismissed the lawsuit.
  - Advocated for site-by-site septic system determination – promised, but blanket determination continues.
  - Saw members appointed to the South Deschutes, North Klamath County DEQ Steering Committee – once 15 members, now just six or seven in all.
  - Drafted a petition to amend OAR 340-071-0130. Collected over 400 signatures. Petition denied by EQC at the request of DEQ.

Many feel that legislation is the only alternative. They also believe that aggressive waste water treatment agendas without regard to affordability are potentially a state-wide problem.

POLICY HAS A PRICE that the La Pine Basin Paid

- The number of La Pine businesses trended sharply downward in 2006. The rest of the County trended down in 2007 at the Recession.
- There was a strong and negative relationship between the reported septic issues and depressed home sales, home values and foreclosures.

Good policy relies on verifiable data with transparent criteria. It always seeks the least cost to the consumer.

Alternative Treatment Technology Septic Systems

- **Expensive**
  - **New Construction**
    - **$13, 000 & up**
  - **Retrofit**
    - **$18,000 to $40,000**
- **Maintenance costs**
- **Complicated**
  - **Electric power**
  - **Phone line**
- **Rigid, requires**
  - **Consistant use**
  - **Constancy of use**

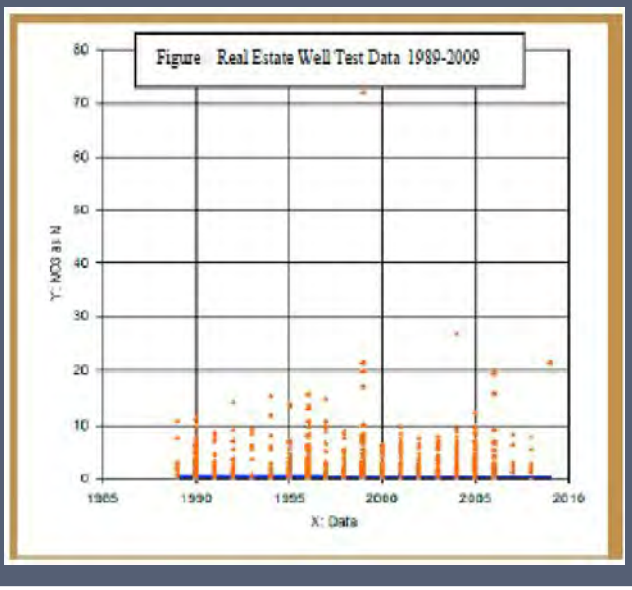
Blue Baby Syndrome La Pine Basin Water Proves Safe

Blue Baby Syndrome or infant methemoglobinemia, is a condition with too high a concentration of nitrates in the blood – giving the infant's skin a blue tinge. Wellwater was believed to be the cause. Only two U.S. cases were reported since the 1960's. No cases of methemoglobinemia were reported in the La Pine Basin. In addition, well test data in the real estate or DEQ well test databases failed to show e coli contamination.

No Trend of Nitrates Emerged in the La Pine Basin

Findings did not support the agenda. According to the available well test data, the La Pine Basin is not loading with nitrates. After sixteen years and millions of taxpayer dollars, and an extensive analysis of the data (thousands of data points and countless hours of analysis), no trend of nitrate loading emerged.

(Blue line in chart is the trend line.)



Environment and La Pine Septic Systems

Stream gains and losses along most of the Deschutes and Little Deschutes Rivers in this area are small, indicating relatively little net exchange between ground water and surface water (USGS Report 00–4162).

Ground water moves slowly through the shallow aquifer. Because ground water moves slowly, it takes a long time for nitrate to appear in well water. For example, the severity of nitrate contamination in the La Pine core area did not become evident until 1979, nearly 70 years after development of that area began (USGS Fact sheet 2007-3103).

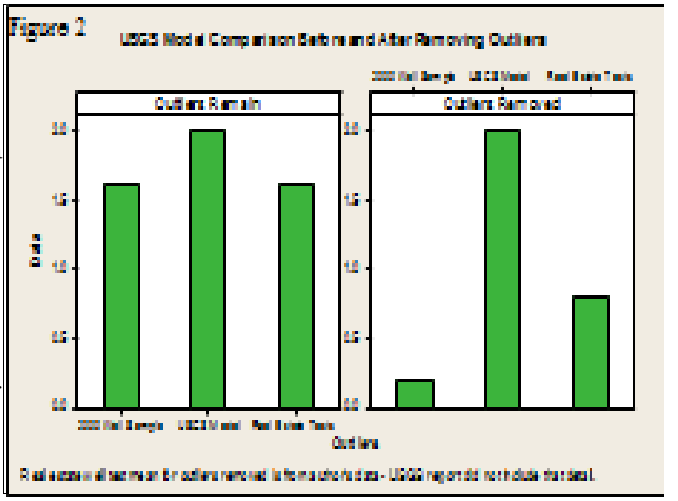
As these statements suggest, disadvantaged communties have time to get creditable monitoring data and develop an affordable plan without endagering the environment.

All the aggresive agenda in the La Pine Basin accomplished was spending millions of taxpayer's dollars and exhausting life savings! The aggressive agenda has yet to significantly impact nitrate levels. Monitoring wells were lacking or insufficient to show a need.

Public Trust Erodes

Public distrust built in the La Pine Basin. By 2008, a political revolt occurred when Deschutes County passed a blanket ordinance requiring expensive alternative treatment technology septic systems (ATT). That ordinance was overturned and an earlier ordinance requiring ATT's for many home construction projects or major repairs to standard septic systems repealed. Although, ATT determination is currently by a case-by-case basis, uncertainty and distrust of government continues. One of the reasons given for the 2011 well re-test was a lack of trust in the available data, including the USGS Nitrate-Fate Transport Model developed by Morgan (et al, 2007).

Rigor is important, especially when the analysis of the data leads to public policy affecting the lives of residents. In 2000, USGS, DEQ and Deschutes County sampled 192 wells, using that data as one comparison against the USGS Nitrate-Fate Transport Model (Morgan, et al, 2007). What the USGS reports failed to disclose were monitoring wells drilled in or near septic drain fields. One such well, number 1227, was drilled just nine feet from a drain field and had the highest nitrate value of any well in the sampling (25.9 mg/L). The USGS also used descriptive statistics from the Oregon DHS Real Estate well sampling as another comparison to the Model.



In total, there were three significant areas where a lack of rigor affected the USGS Model:

1. Comparison of measures of central tendency and ranking of the data should exclude outliers (see definition below). Robust procedures for other analysis are not sensitive to outliers, but comparison of descriptive statistics, such as the mean or the 90th percentile are easily distorted by their presence. The authors should have adjusted for outliers and then used a statistical test to determine if the distributions were the same with and without the outliers (Walfish, 2006). They did not.
   a) The 2000 well sampling had outliers that widely differed from the rest of the sampling. For a comparison of values, such as the mean before and after removal of outliers, see Appendix ii.
   b) The real estate well sampling undoubtedly had outliers. (That table of real estate well values was not provided by Morgan (et al, 2007) but analysis of the interquartile range and the author's box plot strongly suggested their presence).
2. The Model based the mean annual nitrate loading per household on a non-representative sample of just 69 households for the Basin. Morgan (et al, 2007) was silent on the existing literature about nitrate loading that suggested mean loading rates 20 to 30 percent less than that used in the Model.
3. USGS failed to consult the most reliable occupancy data, the U.S. Census and Midstate Electric Cooperative. Instead, the Model used the La Pine Chamber of Commerce and the U.S. Post Office, potentially overstating occupancy rates for the Basin.

Outliers are atypical, infrequent observatons.

Morgan, D.S., Hinkle, S.R., Weick, R.J. (2007). Evaluation of Approaches for Managing Nitrate Loading from On-Site Wastewater Systems near La Pine, Oregon (SIR 2007-5237). USGS.
Walfish, S. (2006). http://statisticaloutsourcingservices.com/Outlier2.pdf.

A Disadvantaged Community

- ___% of Households with incomes ≥ 120% of federal poverty level; or
- Median household income ≤ 80% of statewide median household income; or
- Unemployment rate ≤ 80% of statewide unemployment rate.

La Pine an Example

Poverty Indicators:

- Family Poverty:
  - La Pine 13.6%
  - Oregon 10.2%
  - Food Stamps:
    - La Pine 21.8%
    - Oregon 14.6%
  - Social Security – fixed income:
    - La Pine 51.2%
    - Oregon 29.0%
  - Median Household Income:
    - La Pine $35,292
    - Oregon $49,850
  - Unemployment
    - La Pine 17.9%
    - Oregon 9.8%

Source: U.S. Census

The La Pine Basin

- Characteristics
  - Lava Butte to Chemult
  - A Basin – go up to go out in any direction
  - Over 21,000 population
  - Many platted lots in subdivisions, platted before the land use laws went into effect.
  - Some sewered subdivisions
  - Some subdivisions on public water
  - Majority on permitted individual septic systems

La Pine Core Area

- Platted much earlier – turn of last century
- Mostly small city lots
- Some septic systems predate permitting laws
- Some businesses had open bottom cesspools to the acquifer level
- Soap bubbles in the wellwater – a laundromat!

DESCHUTES COUNTY

Citizen's Action Group

DEQ South Deschutes and North Klamath County Groundwater Protection Steering Committee: Possible and Anticipated Recommendations✶ vs HB 3186

- ✶ Goal 11 exception for the La Pine Basin platted lots only:
  - ✓ Will not address affordability of solutions for communities – only allows sewering options.
  - ✓ Would not solve immediate economic problems – HB 3186 does.
- ✶ Moratorium on ATT systems for _?__ years
  - ✓ HB 3186 allows a variance based on disadvantaged community criteria, it is not bound to any time span. Instead, HB 3186 allows a community to develop a plan (could be a Steering Committe recomendation) that only rolls out when affordability is met.
- ✶ Sanitary authority (SA) to manage the La Pine Basin
  - ✓ Would not solve immediate problems as a SA requires a vote of the electorate – could require years to accomplish. Political will probably not there.
  - ✓ HB 3186 brings respite immediately upon pasage.
- ✶ Monitoring wells – cost unknown
  - ✓ HB 3186 requires that DEQ study and report to the Legislature on the costs and other issues concerning monitoring an area.

✶ Means possible recommendaton

HB 3186 will act as a facilitating framework that allows the implementation of Steering Committee recommendations. It does not supplant or negate the Committee's work or recommendations.

Why Statewide?

There are many unincorporated rural communities in Oregon

- Over 1,000 named places, potentially disadvantaged communities
- Income level and poverty levels go hand-in-hand in rural communities.
- Unemployment levels are greater, including underemployment, because jobs are fewer and the distance to employment greater.
- Rural areas tend to have a higher rate of retirees and seniors than the metropolitian areas. That means more with fixed and limited income to absorb septic upgrade costs.
- Resources are scarce, including access to the Internet or a plurality of choices. Installation costs, for instance, can be greater because competition is less and the distance greater.