

**ISLAND COUNTY BOARD OF HEALTH  
MINUTES OF MEETING - OCTOBER 11, 1999**

The Island County Board of Health convened in Regular Session at 11:15 a.m. on October 11, 1999, in the Island County Courthouse Annex, Coupeville, Wa., with Board of Health Members present: Mike Shelton, Chairman; Wm. L. McDowell, Member; and William F. Thorn, Member.

Also present: Roger Case, M.D., Health Officer; Tim McDonald, Health Services Director; Keith Higman, Environmental Health Director; Doug Kelly, Island County Hydrogeologist; Carrie McLachlan, Public Health Coordinator.

**COMMUNITY HEALTH ADVISORY BOARD (CHAB) APPOINTMENTS**

Based on the recommendation of CHAB and the interview team, the Board by unanimous motion appointed Patricia Whitcomb to fill position #18 and Mary Anderson appointed to fill Position #2 on the CHAB.

**COMMUNITY HEALTH ADVISORY BOARD UPDATE**

Ms. McLachlan, on behalf of CHAB, briefly reviewed with the Board items from last Tuesday's CHAB meeting, primarily consisting of a number of the different emerging issues, the goal to summarize those issues and where appropriate bring closure to those issues: the patient first model of care being examined by Whidbey General Hospital; Initiative 695; an update on key resources and Internet sites in preparation of the November meeting to review disaster preparedness; addressed the issue of early brain research, youth violence and the effectiveness of early intervention and home visiting programs. Copies were provided of *Washington Kids Count – Island County Profiles of Child and Family Well Being* published by the University of Washington on an annual basis. CHAB confirms its recommendation that the Board consider support of the designation of county funds toward a universal screening and parent education program for all newborns in Island County, believing prevention from day one will result in healthier families and children ready to learn and be productive community citizens. From the perspective of need for programs aimed at supporting the youngest County residents and their families, Ms. McLachlan gave each Commissioner a pin with the saying: *“Planting the Seeds of the Future; If you love, respect and value children they will grow up to love, respect and value others; There is no Greater Inheritance”*.

A screening program would start pre-natal with some of the families. Two of the things that have worsened as shown in 1997 figures is the lack of prenatal care, and increased teen pregnancy. Also, there were increases in child abuse and neglect referrals are up, as is increase in juvenile arrests, and if the program were put in place it is hoped that number would come down over time.

Commissioner Thorn asked to be provided with a copy of the current matrix showing figures for 200% of Federal poverty level, a measure that depends upon the number of dependents.

Commissioner McDowell commented that as far as the proposal to start a new program, such as At Risk Infants ages 0 – 3, for him was a number one priority.

**GROUNDWATER PRESENTATION**

Keith Higman began the presentation on Groundwater by noting that the focus on groundwater from the Health Department's perspective had to do with public health, in this case, protection of the groundwater resource. Keys to groundwater protection are [displayed by projector, a series of four overheads: Island County Groundwater Resource Protection Efforts; Groundwater Protection; Drinking Water Key Players; Role of Science [copy on file].

78% of Island County's population utilizes groundwater for drinking water; of that, 65% are served by public drinking water supplies routinely tested for quality; 7% served through individual wells that may or may not be tested on a routine basis.

Groundwater in Island County is a finite resource, the only source of drinking water. The City of Oak Harbor and NAS Whidbey receive drinking water supply from the Skagit River through a pipeline from

the City of Anacortes.

Population growth results in an increased demand for resources.

Over the last 15+ years, Island County made great strides looking at groundwater as a resource and implementing resource protection efforts:

1979-83	USGS Water Resource Study
1982	Island County designated Sole Source Aquifer through EPA
1985	Critical Water Supply Service Area
1989	State Health Department/Is. Co. Health Department -Saltwater Intrusion Policy
1990	Coordinated Water System Plan
1990	MOU with – Island County/DOE – Water
1990	ICC 13.03A Water System & Fireflow Requirements Adopted
1990	ICC 8.09 Potable Water Source and Supply Adopted
1991	Groundwater Management Plan
1995	Nitrate Study
1996	Island County Hydrogeologist hired
1997-2001	Joint venture with USGS - Recharge Study

Drinking Water – key players include:

State Department of Health - 14 connections and above  
Island County Health Dept. – 14 connections or less  
Department of Ecology – Water Resource Management

Role of Science: Science/Policy Development/Decision-Making

The basis of the input of science is that it allows development of policies that led to groundwater and resource protection, and as those policies play out in every day work, it leads to making sound decisions about projects, groundwater protection and resource allocation. The decision making process hinges upon the availability and quality of the science going into the decision process.

Doug Kelly's part in the presentation focused on some of the work being done and that has been built upon and how that science provides the County better decision making. He provided a two-page hand-out entitled "Island County Hydrogeology" [copy on file]. He then gave a brief overview of what is being done from a groundwater science perspective in Island County.

The data base developed contains currently about 5000 water well reports, including some 33,000 stratigraphic descriptions, and over 48,000 groundwater chemistry sample results. Analysis tools include: Chemical Analysis [single well]; Well Search/Mapping; Groundwater Monitoring Network; and Stratigraphic Mapping & Modeling . He was not aware of any other county that has data like this, and he receives a steady stream of visitors from other counties and from the University of Washington.

On a very regular basis when evaluating some proposal for potential to impact groundwater, Mr. Kelly noted the County has the ability to search the data base for data within the vicinity of that particular project. From that a map can be created -- plot wells and particular perimeters about those wells. A new tool developed this summer generates a map restricting plotting to two perimeters and at a glance gives a view of the stratigraphy from two different angles and allows very quickly to get a view of the stratigraphy and to get a handle in general of what is going on in the subsurface. This also provides the ability from that same regional search screen to ask questions about chemistry in the region. A map can be generated to show water chemistry for each well in the area.

The groundwater monitoring network currently has about 48 wells. Mr. Kelly's long term goal is to get that number up to 100 wells. This Spring the Department applied for and received a \$6,000 grant from Walmart to buy a small submersible pump specifically made for groundwater sampling in small diameter wells and a generator to fire the

pump up. The main thrust of the grant was to add wells from the USGS/DOE test back in the Eighties to the network . He hopes to be able to evaluate wells this Fall and hopefully add all or some to the network this Spring.

A system has been developed as far as stratigraphic mapping and modeling that utilizes existing data to generate groundwater flow models and to do mapping, and allows generating stratigraphic cross-sections in any given area. He is just wrapping up the Central Whidbey study going back and re-visiting stratigraphy with the new tool hopes to complete this Fall and move on to the panhandle of Camano. With regard to studies, the USGS Recharge study is in year 3 of 5 and will be a key player in any of the models developed. USGS is in the stage of completing data collection and intend to pull out data collection equipment in the next several months, and Island County worked it out with USGS to get half of that gear that can be re-deployed immediately to be able to start collecting additional data.

Mr. Kelly made the point that seawater intrusion is a local phenomena. The way the aquifers are configured and the way sea water intrusion works there are areas that are inherently problematic and those areas require a different type of regulation than other areas. He then turned the focus of the presentation and discussion to Island County Groundwater Problems.

Arsenic. A naturally occurring compound, present in groundwater all over the country. The MCL [maximum contaminant level] as established by US EPA currently is 0.05 mg/liter. At that level there are only 6 wells in the data base that exceed that concentration. However, US EPA is revisiting their MCL and is likely to go to 0.01 mg/liter, and in that event, Island County will have 123 wells exceeding MCL. Arsenic can cause skin damage, circulatory system problems and increases cancer risk. Treatment is commercially available for systems.

Nitrate. Nitrate has a MCL of 10 mg/liter. At that level there are 26 wells in Island County that exceed that level. The maximum contaminant level goal is 5 mg per liter, and at that rate, there are 106 wells that exceed that. Sources are agricultural chemicals, fertilizers, well construction, septic systems. Mitigation is done through proper well construction, good agriculture practices and good septic system design and maintenance.

Chloride (seawater intrusion). With a secondary MCL of 250 mg/liter, there are 73 wells in the County that exceed the SMCL. The regulatory threshold is 100 to 200 mg/liter and in that category in Island County there are 169 wells [considered medium risk for seawater intrusion). There are 100 wells greater than 200 mg/liter, considered high risk.

Washington State Department of Ecology. DOE is responsible for resource protection and allocation of water rights for withdrawals greater than 5,000 gallons per day. DOE at this point is questionably doing that job, massively underfunded. The lack of DOE issuance of water rights confounds the CWSP and any attempt at managing the resources.

Mr. Higman ended the presentation by reiterating some key points. Systems are required to test for quality periodically but ultimately to manage the resource long term the interest is to provide protection of that resource from potential contaminants. The way Island County has historically protected groundwater is through controlled land use. The two major tools utilized currently are: (1) Island County Code 8.09 whereby the Department reviews all projects with a potential for contamination of groundwater in order to mitigate those potential impacts; (2) Salt Water Intrusion Policy. DOE has let the County know one of the reasons why their focus is changing is that they are going to dedicate some staff to codification of their salt water intrusion policy so it will become a rule. The County has made huge strides in the past few years in knowledge of ground water systems, what salt water intrusion is and how to assess salt water intrusion, knowledge of land use activities and the potential for contamination of resources. Decisions made are as good as the science that goes into the development of those policies.

Meeting adjourned at 12:15 p.m.; next regular meeting scheduled for November 8, 1999 beginning at 11:15 a.m.

BOARD OF HEALTH  
ISLAND COUNTY, WASHINGTON

Mike Shelton, Chairman  
Wm. L. McDowell, Member  
William F. Thorn, Member