

Thurston Cty.. Mineral Lands

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Improving the designation of Sand and Gravel facilities

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Designating Resource Lands

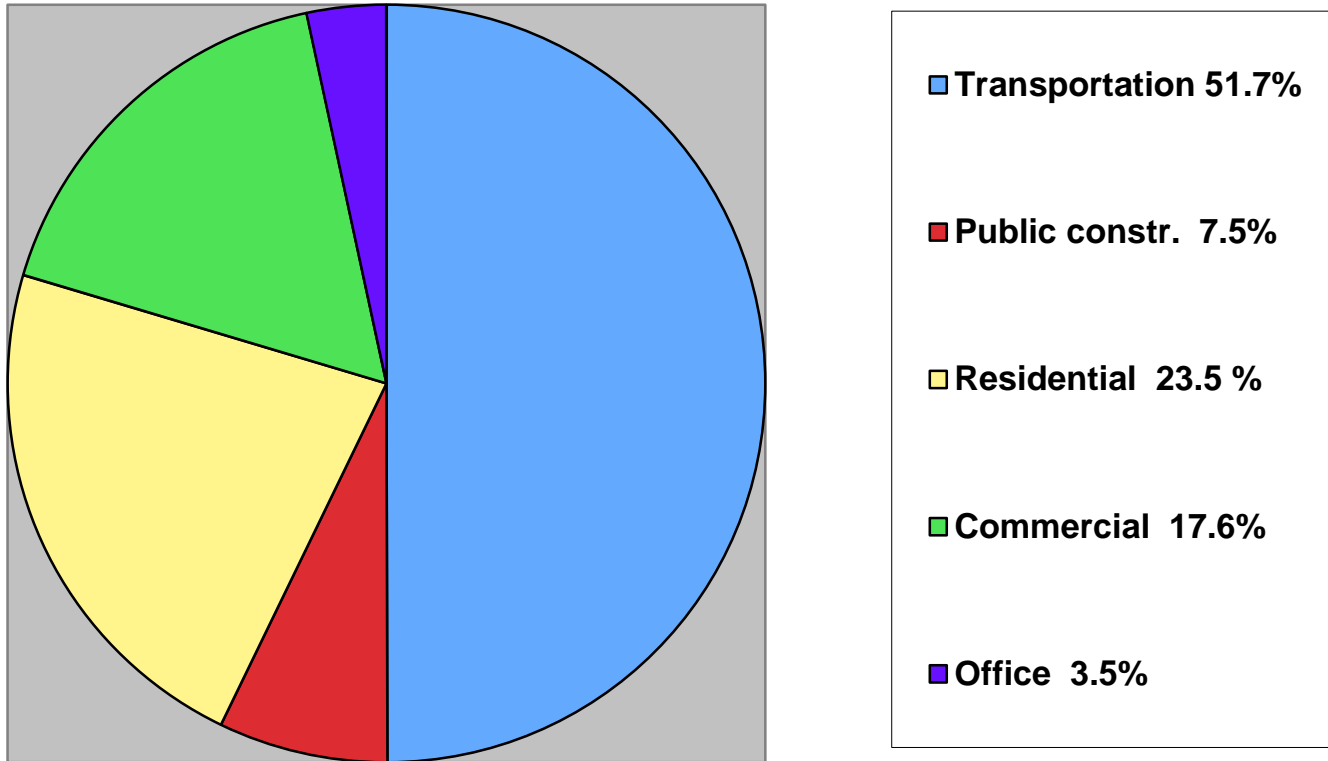
- First requirement of GMA. RCW 36.70A.170
- Designations and development regulations were due by Sep. 1, 1991.
- Development regulations can't prohibit existing uses.
- Development regulations must assure adjacent land uses do not interfere with resource activities.
- Periodic review required- RCW 36.70A.131
- Some jurisdictions only designated existing uses

Designating Resource Lands:

Based on fundamental planning- The land speaks first

- Knowing where MRL, critical and natural resource lands are allows for smart planning; A fundamental intent of GMA
- Enables continued access to valuable minerals and avoid land use conflicts from poorly sited development
- Incompatible zoning IS the bigger issue and contributes to conflicts
- Designating only active mines doesn't meet GMA compliance, doesn't conserve the resource & will increase future land use conflicts.
- A purpose of designation is identifying and communicating MRL of LTCS to the public for their planning
- Designation does NOT indicate or assure a permit will be issued, but the land may be used as intended in the future.

WA Consumption Factors in Designation




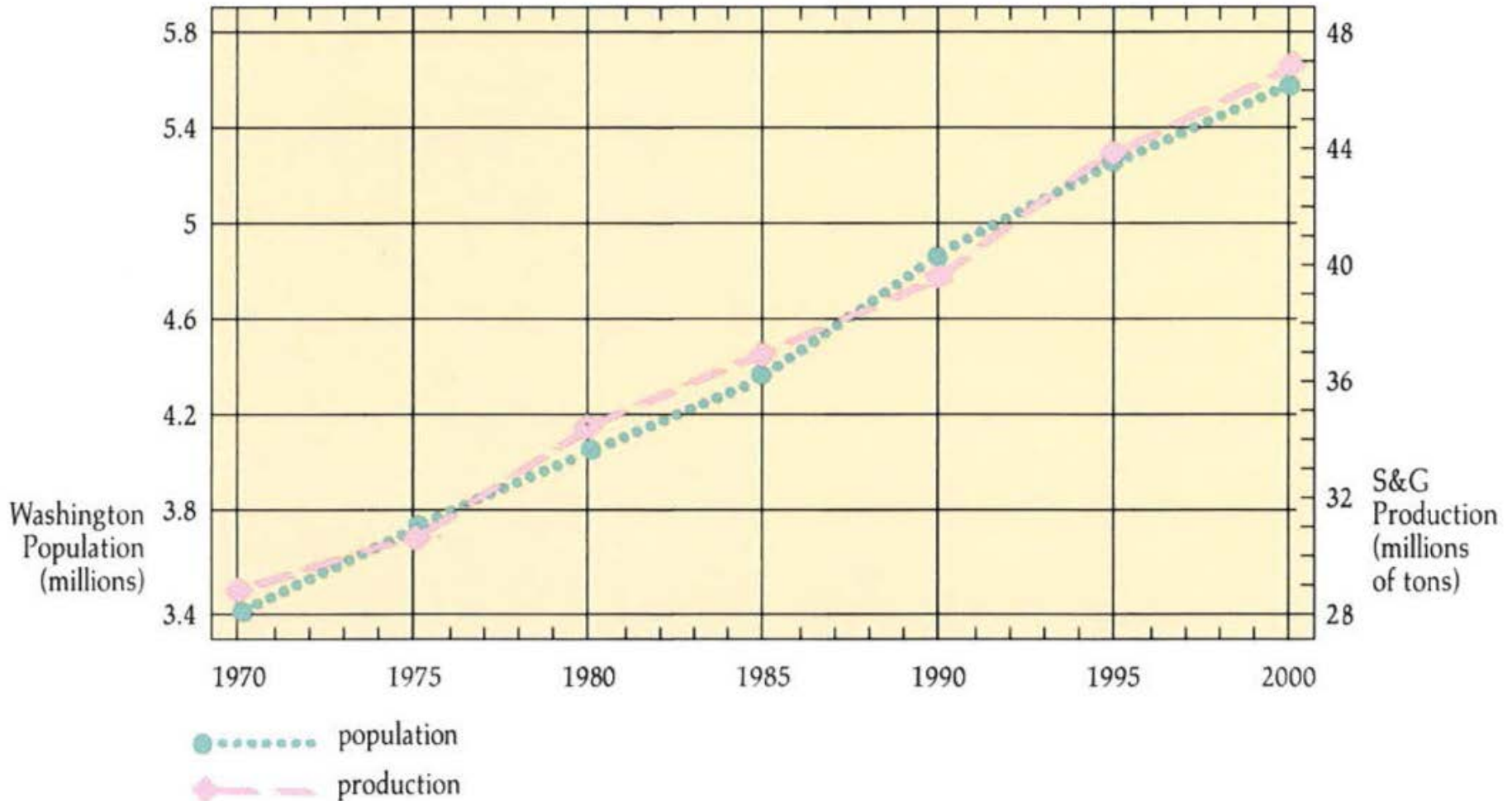
60+% use by cities, counties, state - Our largest consumer

2 questions asked:

- #1 Market for sand and gravel ?
- very high, finite resource, Cty. projections confirm and support strong & continued demand. S&G likely used in 90% of the construction aggregate applications.
- Population growth
- Transportation / Infrastructure rebuild projects
- Capital projects to support state govt.
- Schools, shopping, hospitals etc.

WASHINGTON POPULATION PLUS SAND & GRAVEL PRODUCTION REQUIREMENTS

 *Sand and gravel production and consumption parallels the population increase*



Thurston County Population projections

- 1993- 177,058
- 2004- 223,065 +25.9% *
- 2017- 276,900 +24.1% *
- 2025- 352,652 +27.4% *
- 2035- 410,199 +16.3% *
- **1993 – 2035 = 232% increase in growth**
- Cty. 2003 estimate tons / person annually
13.5-

• ** OFM GMA projections- December 2017

Construction Aggregates used in Residential via Jobs & Economic Development



- Snohomish cty example:
- By 2025 over 92,000 NEW jobs will be added; (4,350 new jobs / year)
- Sno. Cty. 1998 – 2002: Cty. adds 34,150 new housing units, w/ a growth rate of 4,600 new households / year thru 2025.
- ***State capitol and agencies, non profit organizations will continue to assure new state and related workers.***
- ***Thurston Cty. new households- 2025 = 14,406***
- ***40% increase countywide housing units 2016 – 2035***
- ***Approx. 250 tons per house typical consumption***

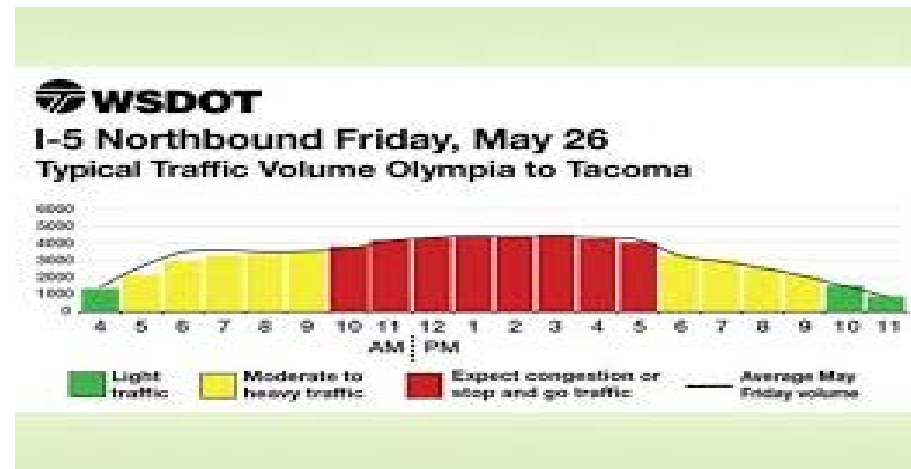
Projected Housing Consumption

- 1993- 73,293 units
- 2004- 93,727 +27.8 %
- 2016- 115,370 + 23.1%
- 2035 TRPC estimate - 160,250 **+39.9%**

@ 250 tons of aggregate products used / house:

- 1993: 18,323,250 tons
- 2035: 40,062,500 tons **+218%**

Aggregates in Transportation / Snohomish Cty. example- 2005

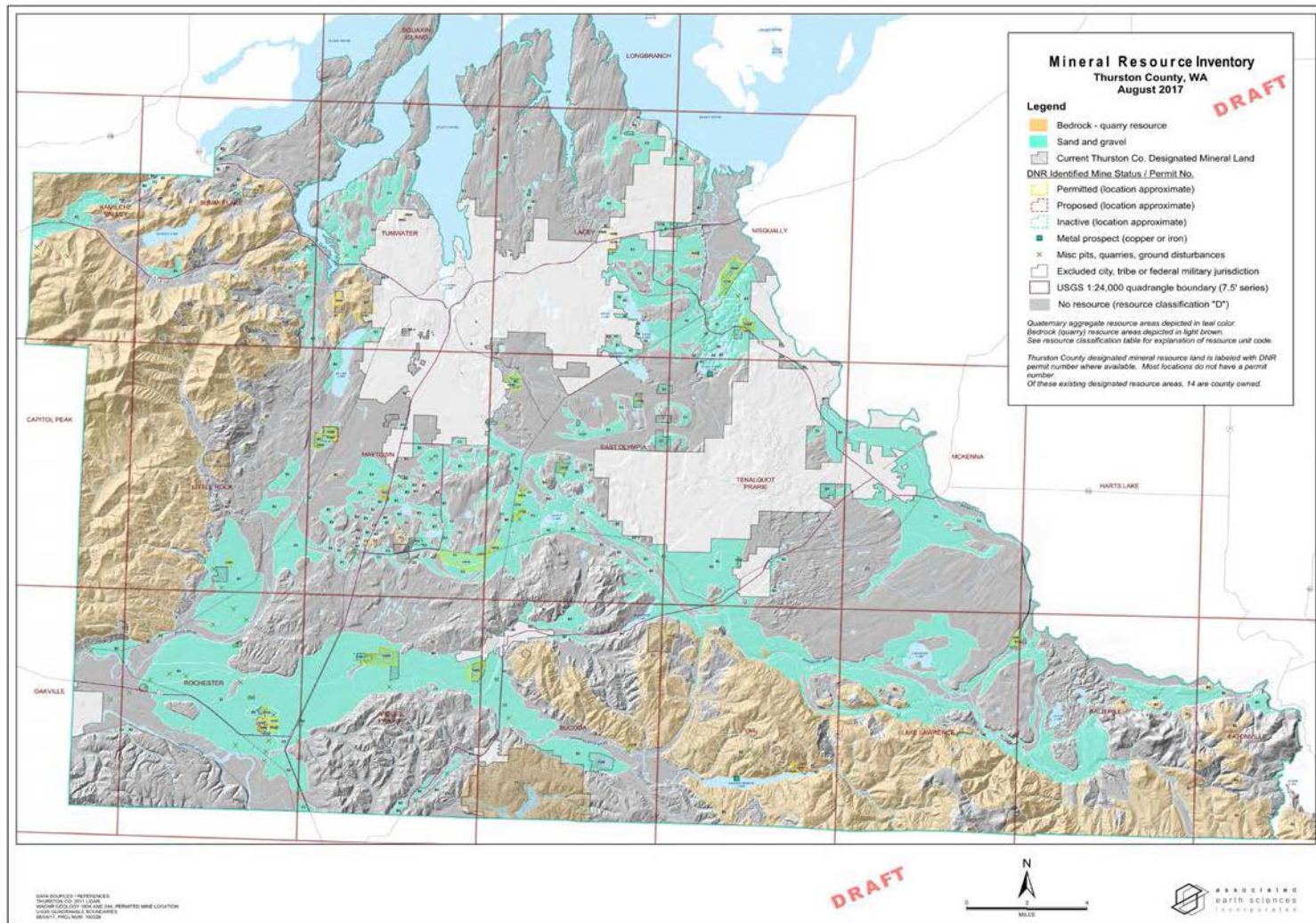


- County Overlay program: Historically, County resurfaces an AVERAGE of 100 miles of Roadways / Year = **70,000 Tons/Year**
- 2005 Transportation Project List: Over \$22.6M in State Hwy Corridor Improvement projects, “High priority” City & Cty. Arterial Improvements, HOV & Transit projects
- Average ANNUAL County Aggregate Consumption (last 5-7 years): **1,085,00 TONS / YR**
- Cty. Road Dept. Road maintenance usage - **135,000 tons / year**
- Major PW Road Projects (2.6 miles)- **160,000 tons / year** (61.5 tons per mile)
- New Residential Subdivision Road (13.4 miles / yr.)- **720,000 tons / Yr.** (53.7 tons / mile)
- By 2025 at least 650 ACRES of new parking spaces will be needed
- 31,000 new vehicle trips / day
- ***Annual estimated general calculations: 2,170,000 tons per year***

Partial Thurston Cty. estimated Transportation considerations

- RCW 36.81.121- 6 year Comp Improvement Plan
- 2018 – 2023- Projected **35 Priority Projects**
+ 10 County program projects
- **2018 Road fund:** Road, bridge, maintenance & preservation = **\$12,381,676**
- **2021- 2023 Road Fund = \$40,507,787 + 327%**

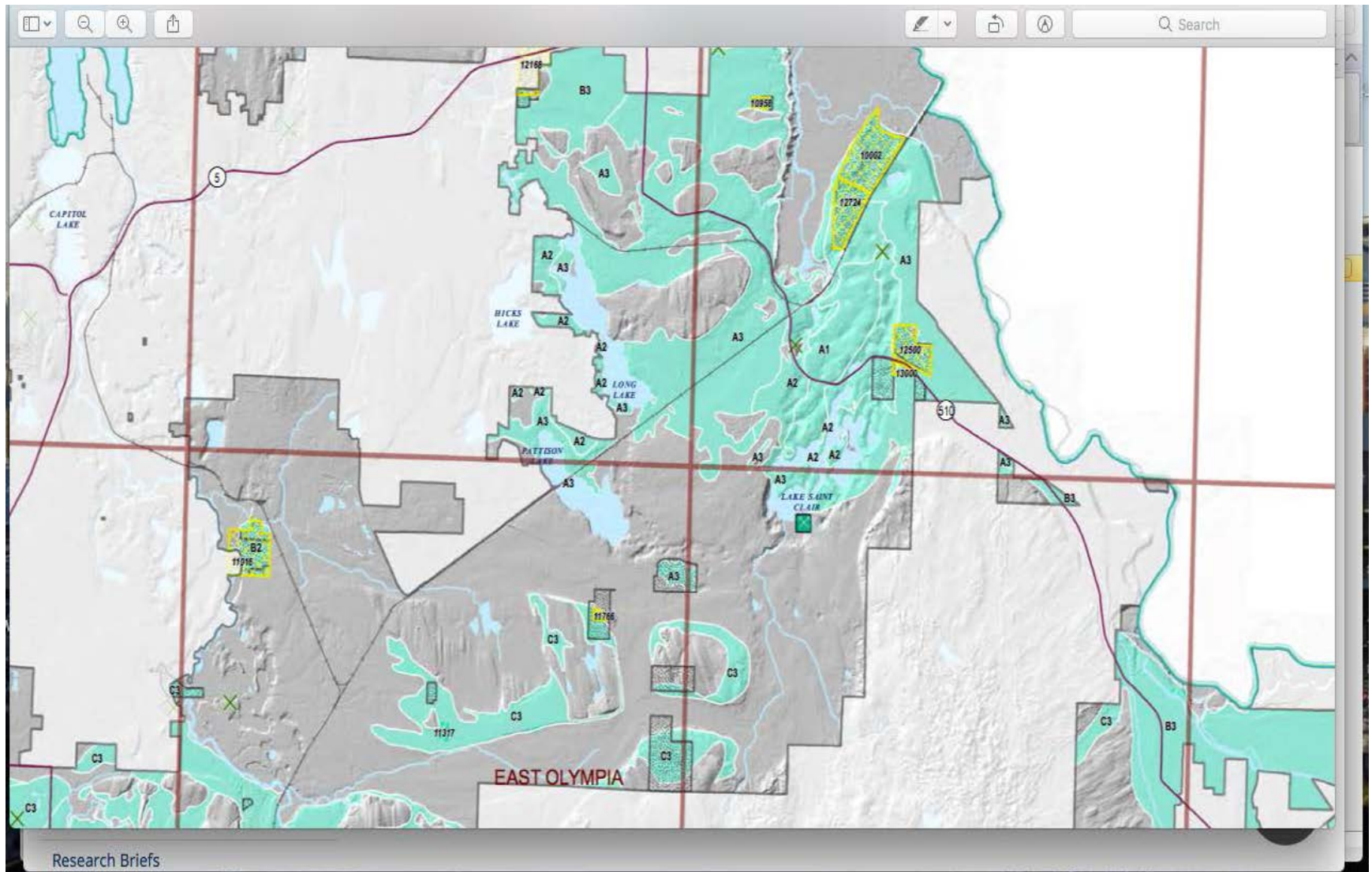
Designation of known and viable mineral resources- Location matters



Classification Matrix

- Similar as used by Snohomish Cty..- identifies resource quality and location. Good tool...
- 2005 = 3,254 acres = 71.7% S&G permits, 24.3% Hard Rock, 3.9% Other
- 2006 Comp Plan designated: 141,928 acres BUT; 81.6%- Designated Bedrock, 6.6% *Type A-1,2 S&G*
- *Caution on making same mistake of not permitting what you are consuming.*
- *Insure you are permitting A&B classified sources to meet WSDOT specifications*

Large designations, fewer permits



Thurston County Aggregate permits

- DNR reports: Current active permits- **31** (2005- 41)
- Terminated permits since 1995- **2**

(others may be depleted but reclamation plan is not completed or bond released)

- Permits since 1995- **7** over 22 years
- 1995- 186,419 // 2015- 266,224 = +43.8%
- Recommended to use a 50 yr. vs. 20 yr. estimate
- Takes 7-10 years to get a permit / moratoriums
- * Thurston has many thin deposits, large areas vs. competing overlays restricts permitting

2002 Designation lessons

- County established prohibit designation of.... Criteria
- Cty. didn't recognize dual classification of Forest and Mineral lands- Cty. failed to adopt this task force recommendation
- Only established a MRL overlay- only 14 of 46 sites were formally designated *need for investment and certainty*
- Relied on estimates of available materials versus GMA guidance for designation
- **2002 survey of designated sites: 5 of 17 reported nearing depletion**
- **2005 survey: survey of existing sites: 33/41 responded
17/33 reported stages of depletion 24 said other plans**

***** Mineral resources = Construction Aggregates**

Question #2

Is Thurston Cty. a importer or exporter ?

- **Yes & No**
- 2 cited examples: Cty. report large amounts of S&G exported from Skookumchuck to Centralia coal mines- no longer occurring / private use- almost sole source supply
- Hard Rock- “Gabbro rock” Cowlitz County source depleted. Thurston Cty source exported by Army Corp of Eng. for high quality rip rap.
- **2002- Cty estimated need for 27M cy of “rock” and falls short of this supply..... importer**
- **2002- Reported only 10% of gravel is exported**

Question #2

Is Thurston Cty. a importer or exporter ?

- Adjacent counties permitting & supply- Do they ?
- Results in Regional materials due to non permitting practices
- Supply & demand, transportation costs, proximity to project will dictate sources of supply
- Good hard rock resource exported (Type A erosion control): good material to meet narrow specs will be exported. Steilacoom exported to Brazil
- CA (LA & SFO) gets aggregate supply from Vancouver BC King Cty...
- **Exporting isn't exploitation**..... economics & supply..... all counties import and export.