

Marine Spatial Planning for the Human Dimensions of EBM

Western Coastal Managers Meeting 2009

January 2009

Sarah Kruse, Ecotrust

Ecotrust: Who We Are

- Non-profit working from Bering to Baja
- Working to build a conservation economy: balancing economy, ecology, and equity (3E)
- Sectors: fisheries, forestry, food & farms
- Focus on middle ground solutions to resource management issues

OCEAN Overview

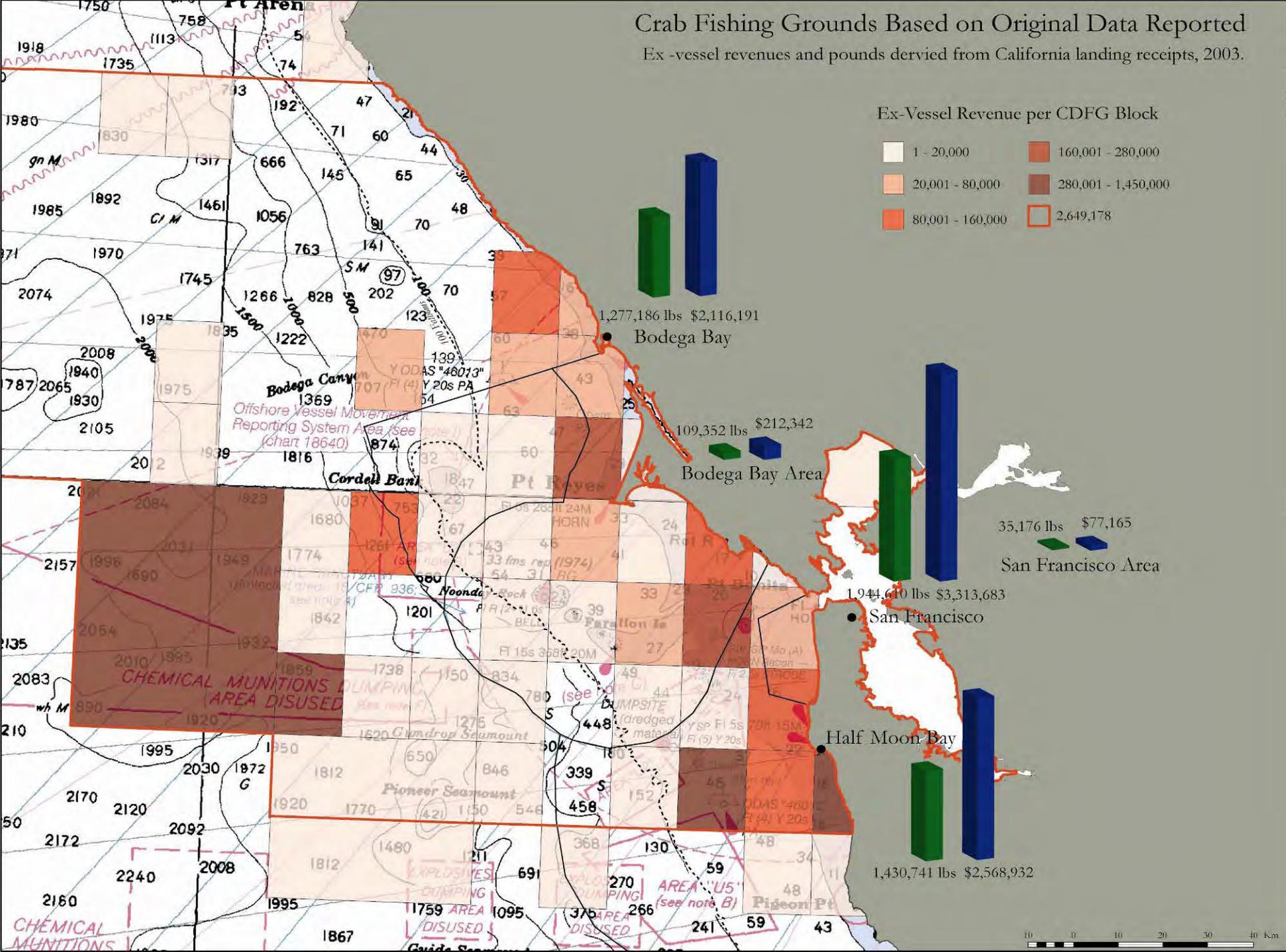
- Collect social and economic data on human use patterns —characterize the spatial extent and relative importance of fishing grounds
- Data can be used to inform design or decision-making processes
 - e.g. California MLPA regional stakeholder group uses data to design marine reserve network proposals
- Do it once: Results can be used for multiple evaluations: wave energy, offshore aquaculture, marine reserves, etc.

Why is this important?

- Increasing demand on marine environment for multiple uses—need to assess trade-offs
- Accurate spatial information about human use patterns is central to this—yet is often poorly understood
- In the absence of comprehensive observer coverage, vessel monitoring systems or other fishery-independent data collection devices, the best source of information are the users themselves
- Brings local expert knowledge to the process—ensuring that the best available information is utilized
- Builds transparency into the marine spatial planning process
- Provides understanding of the ecosystem in a social context
- Allows for implementation at appropriate scales

Crab Fishing Grounds Based on Original Data Reported

Ex -vessel revenues and pounds derived from California landing receipts, 2003.

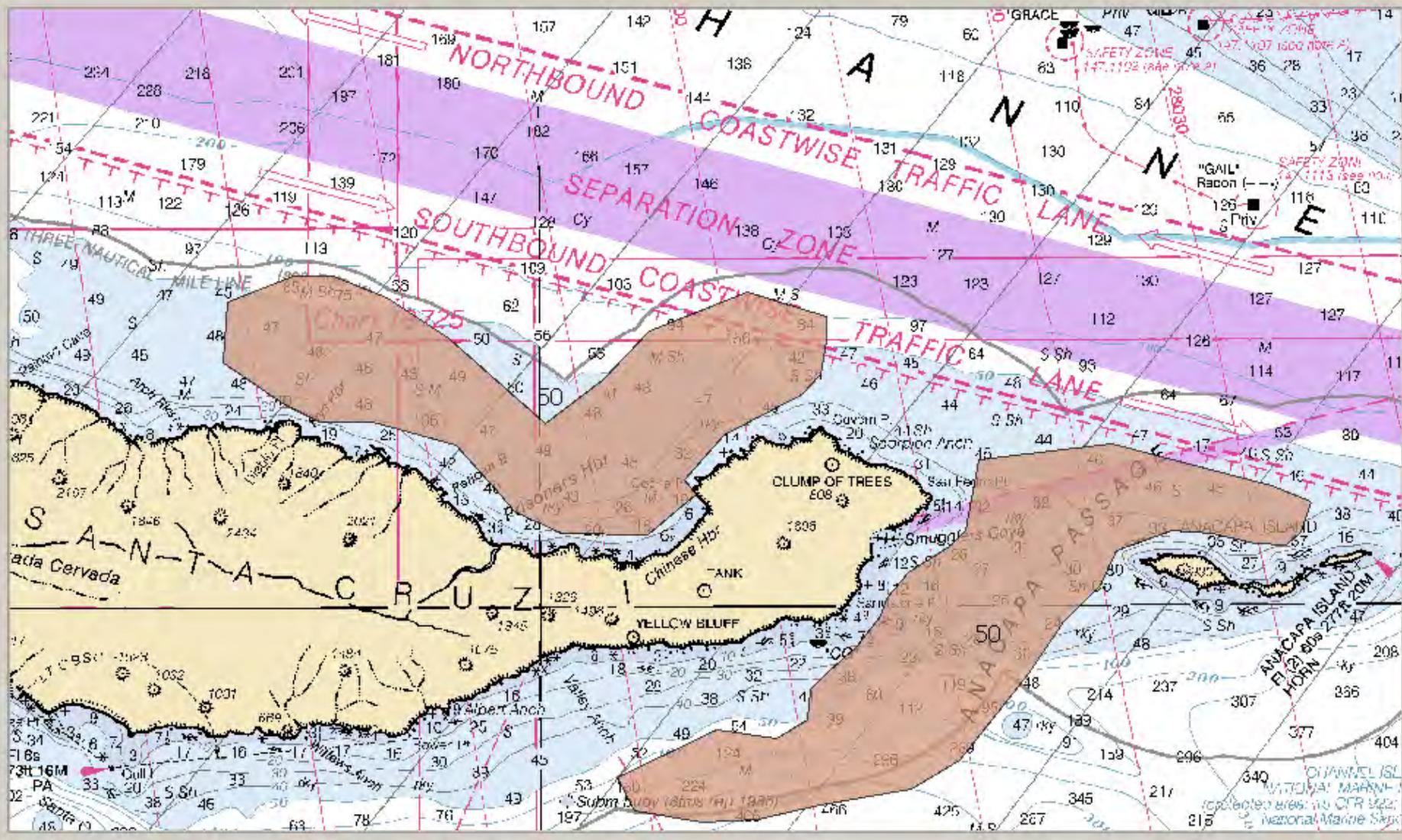


Data Collection Process

- Outreach
 - Confidentiality
- Survey design
 - Identify key fisheries in the study region and differentiate in terms of practices/target strategy, gear configuration and port complexes.
- Data collection tool
 - Open OceanMap (desktop & on-line)
- Interviews follow a shared protocol:
 - Identify all fishing areas/locations that are of importance over their cumulative fishing experience, and rank these using a weighted percentage - an imaginary “bag of 100 pennies”
 - Also collect non-spatial information pertaining to demographics



Not an actual fisherman!



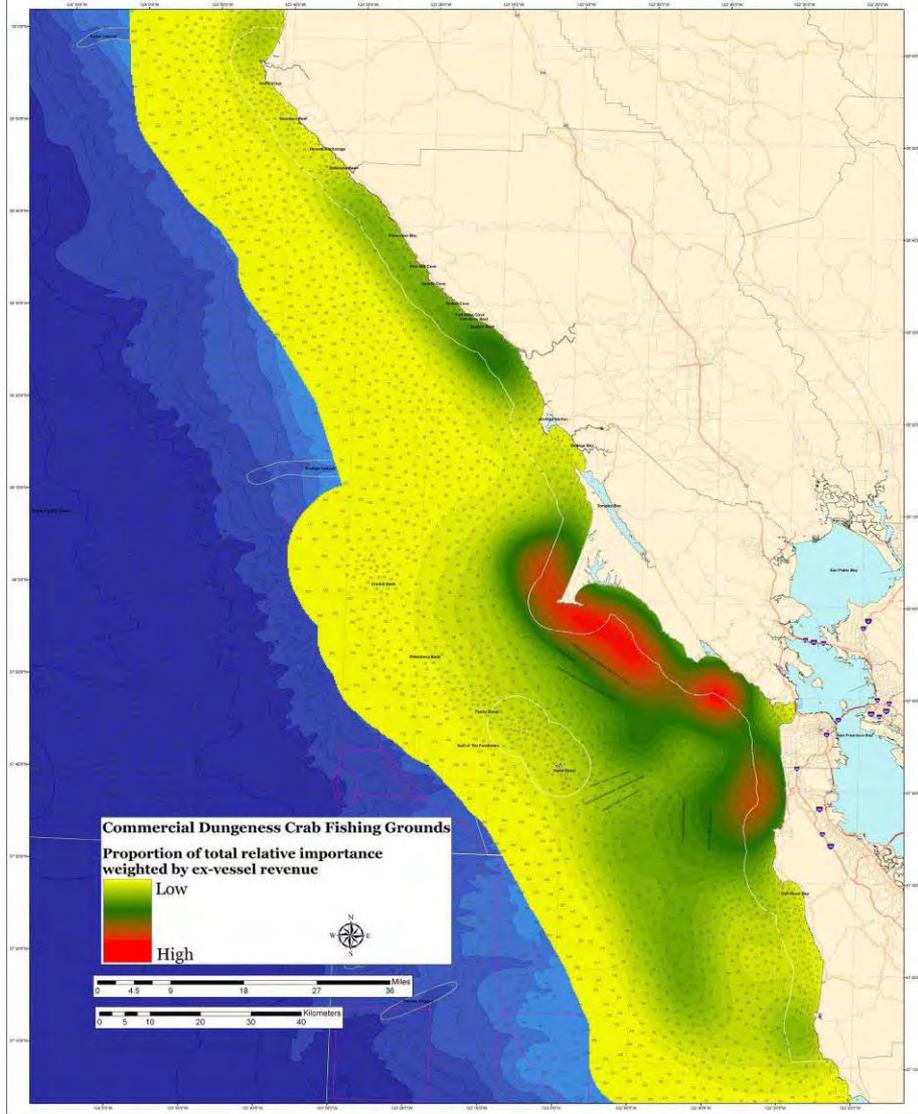
Evaluation

- Iterative quality assurance and control process
- Data analysis
 - Produce datasets for each fishery at both regional and port level
- Evaluating impacts
 - Evaluate the economic (gross and net) impacts
 - For MLPA:
 - Distinguish total fishing grounds and grounds in state waters
 - Determine percentage of both area and value impacted
 - Consider or identify “outliers”
 - Existing fishery management area closures & other constraints

Commercial Dungeness Crab Grounds in the North Central California Coast Study Region

MLPA Initiative - North Central Coast Study Region Fisheries Uses and Values Project - Data Analysis Preliminary Results

DRAFT THESE DATA ARE DRAFT RESULTS FOR DISCUSSION PURPOSES ONLY - NOVEMBER 10, 2007 DRAFT

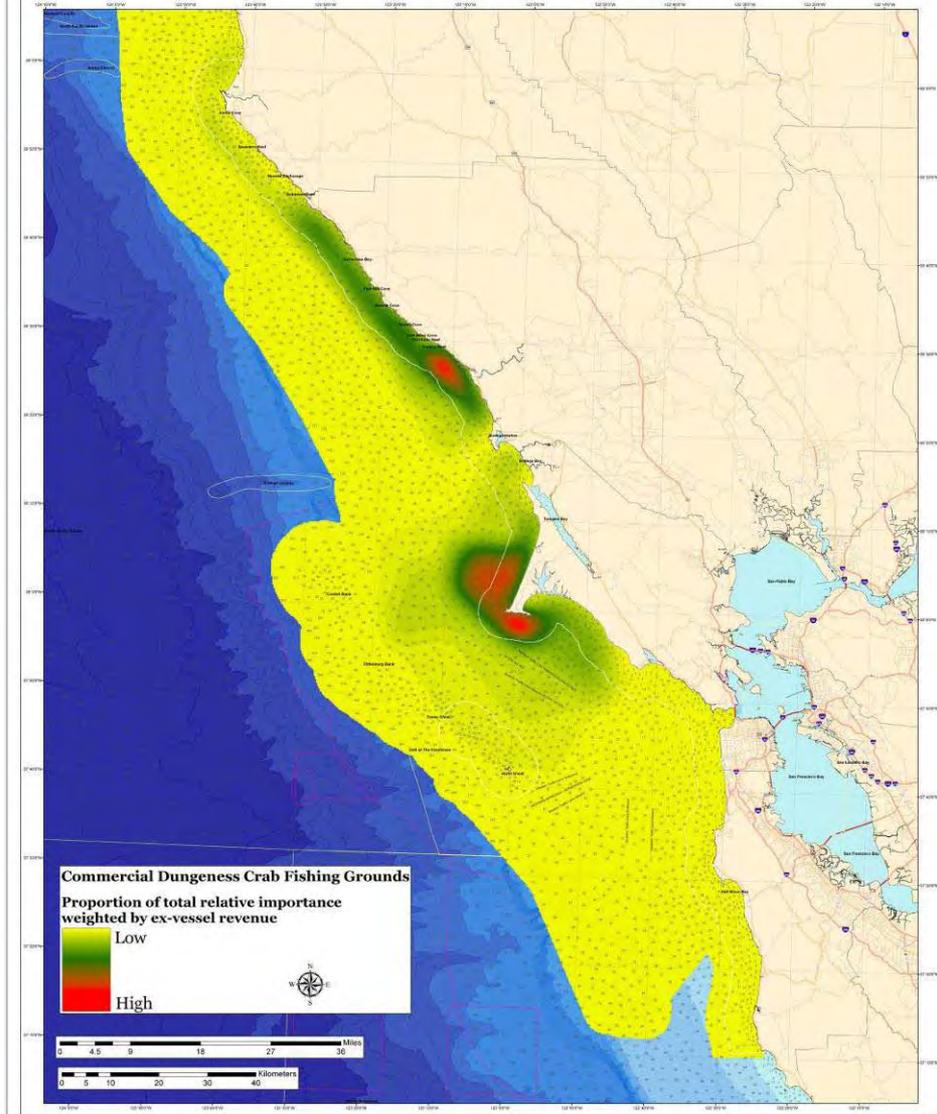


Commercial Dungeness Crab Grounds in the North Central California Coast Study Region

Bodega Bay Area Ports

MLPA Initiative - North Central Coast Study Region Fisheries Uses and Values Project - Data Analysis Preliminary Results

DRAFT THESE DATA ARE DRAFT RESULTS FOR DISCUSSION PURPOSES ONLY - NOVEMBER 10, 2007 DRAFT



Next Steps

- Shoreside Economics
 - Assess potential impacts past the dock
- Marxan
 - Uses biophysical and economic data to inform marine reserve design
 - Klein C, Steinback C, Scholz A, Possingham H (2008) Effectiveness of marine reserve networks in representing biodiversity and minimizing impact to fishermen: a comparison of two approaches used in California. Conservation Letters 1(1): 44-51.
- Marxan with Zones
 - Informs designation for multiple uses

Thank You & Questions

