Community Maps – Sharing Online

Seth Sarakaitis

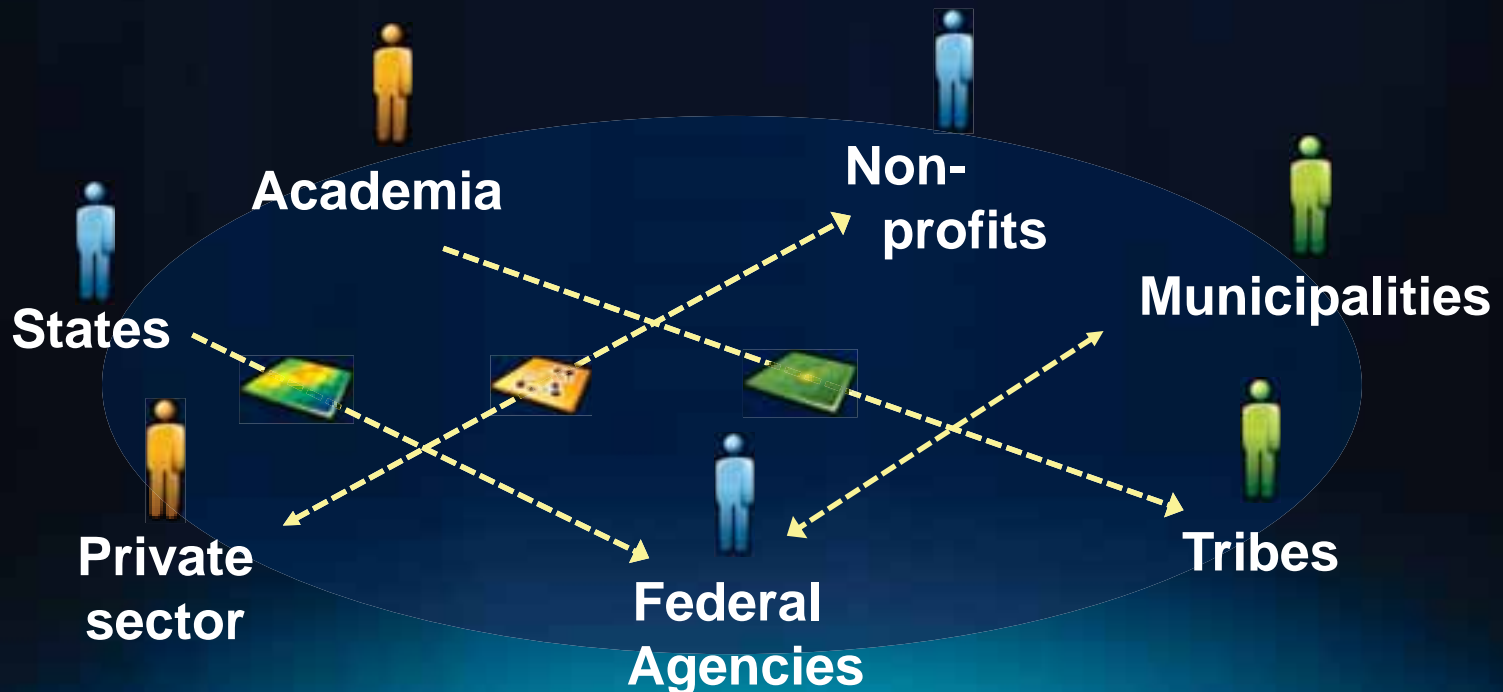ssarakaitis@esri.com or communitymaps@esri.com

Agenda

- **Introduction**

- **Program Overview**

- **Current Status**

- **How to participate / get started**

- **Example of successful projects**
  - **City of Carson**
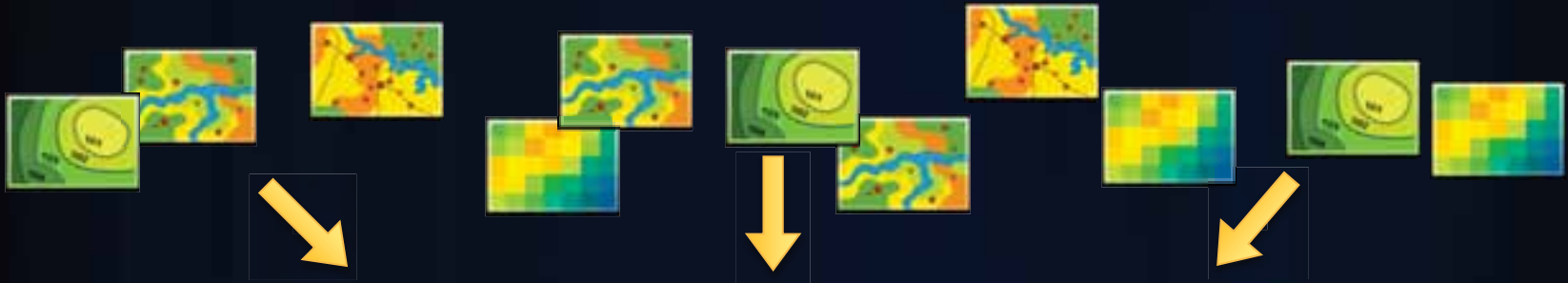 - **City of Rancho Cucamonga**

Communities and Maps

- **All of us are Members of Communities**
- **Maps are our Shared Language**
- **We use Maps to Communicate**
  - *Within* and *Among* Communities
- **We can now *collaborate* with maps in new ways**

Academia

Non-profits

Municipalities

States
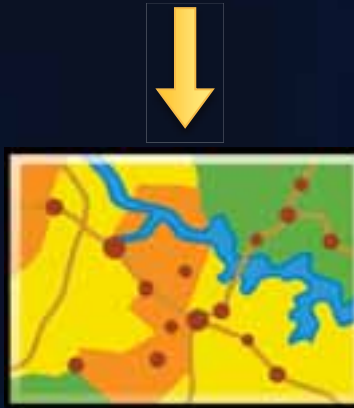
Private sector

Federal Agencies

Tribes

Community maps = a new level of collaboration

Many users from many organizations contributing data

…that is harmonized via shared standards, data models, and templates

…into a comprehensive, multi-scale online map

Community Maps Program

www.esri.com/communitymaps

- **Method to Improve Community Maps that Esri Hosts and Provides Freely to our ArcGIS Users**

World Topo Map

World Imagery

World Street Map

Canada

Portugal

Hong Kong

- **Goal: Add Coverage and Detail to our Online Maps using Rich, Local Data Sources**

Community Basemaps

Esri led initiative to publish ArcGIS user basemap data online

- **Provide Useful and Reliable Basemaps**
  - **Designed to support a variety of maps and apps**

- **Built with Authoritative Data from GIS Community**
  - Data from local authorities and leading providers

- **Provide High Quality Cartography**
  - Beautiful maps built with best available sources

Overview of Community Basemaps

Maps built by and for the ArcGIS Community Curated by Esri

World Imagery Map

World Street Map

World Topographic Map

World Imagery

Imagery mosaic built from best available commercial and public sources

- **USA Imagery Mosaic of 1m or Better Imagery**
  - USDA NAIP, USGS Cities, U.S. States & Counties
  - Commercial, Sub-meter Imagery for U.S. Metro Areas

- **International Areas at 1m or Better Imagery**
  - GeoEye IKONOS Imagery for Major Metro Areas
  - Contributed Imagery for Several Other Countries
    - Great Britain, Portugal, Belgium, Czech Republic, Netherlands, Luxembourg, France (partial)

World Street Map

Street map built from commercial street data and other local sources

- **World Street Map down to ~1:150k Scale**
  - **Highway and Major Roads for City Level Mapping**

- **Detailed Street Map to ~1:10k in Selected Areas**
  - **North America, Europe using Commercial Sources**
  - **Contributed Street Maps for Several Other Countries**
    - **Japan, Thailand, Hong Kong (China), Colombia**

World Topographic Map

Topographic style basemap built from best available data sources

- **Rapidly Growing Community Basemap**
  - **Designed as General Purpose Basemap for mashups**
  - **Compiled to Uniform Cartography from Best Available Sources**
  - **Collaborative effort with ArcGIS Community to add detail and coverage**

World Topographic Map Status

Current status of community basemap in February 2011

- **Worldwide Map down to ~1:150k**
- **USA & Canada Map down to ~1:20k**
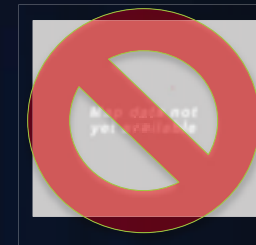- **European Map down to ~1:20k**

- **Selected Cities/Areas down to ~1:1k**
  - **Portland, Philadelphia, Pasadena, Redlands**
  - **New York City, San Francisco, Washington DC**
  - **State of Arkansas, Yosemite National Park**
  - **San Diego, Hong Kong, Toronto, Rancho Cucamonga**
  - **Boston, Cambridge, Charlotte, Denver, Seattle**
  - **Austin, Minneapolis, Sequoia Kings Canyon**
  - **Miami, Dover, Phoenix, Long Beach, Houston**
  - **Napa County, Milwaukee County, Duval County**
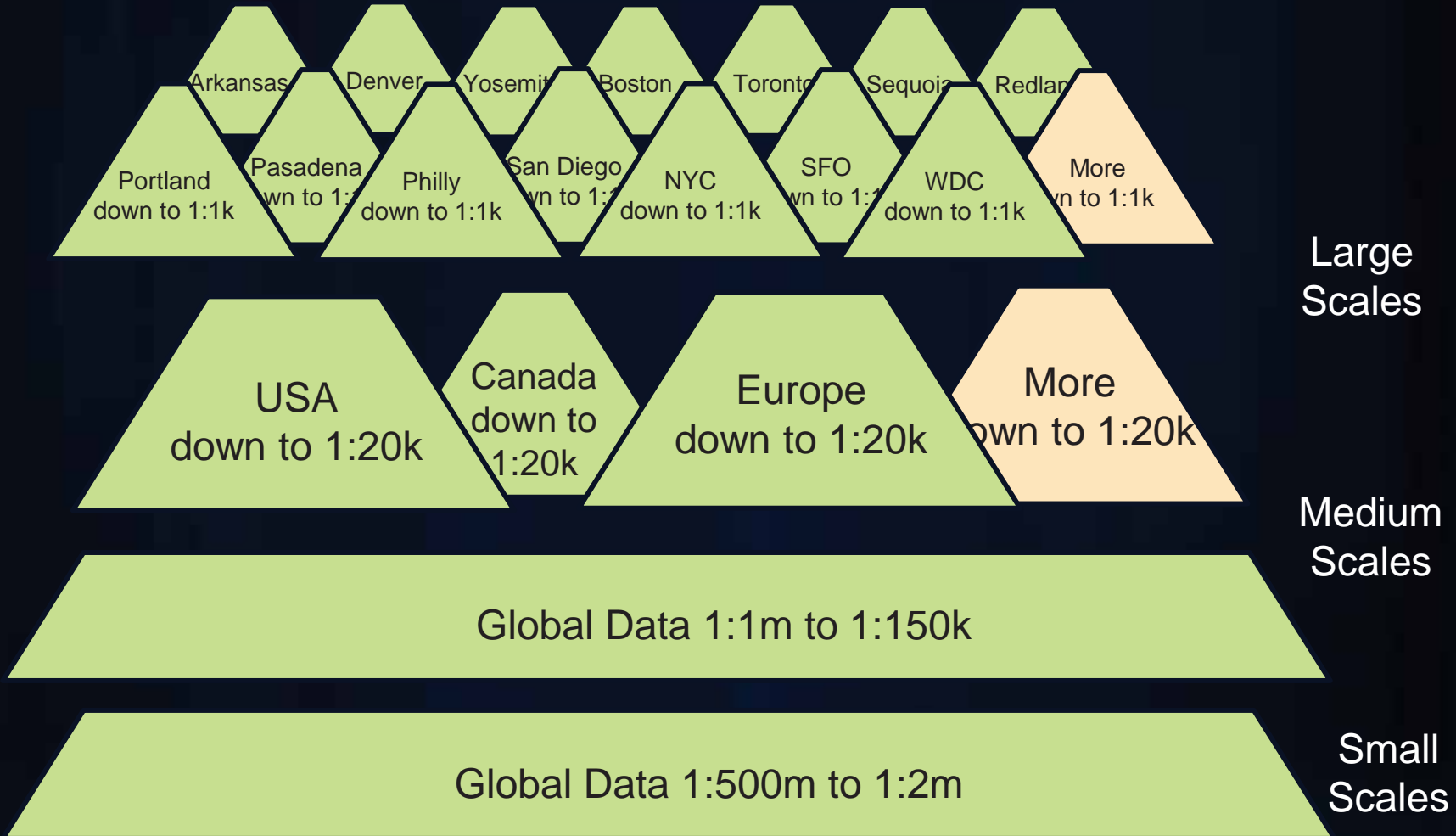 - **Laguna Niguel, Westerville, Broomfield , Sussex County, …**

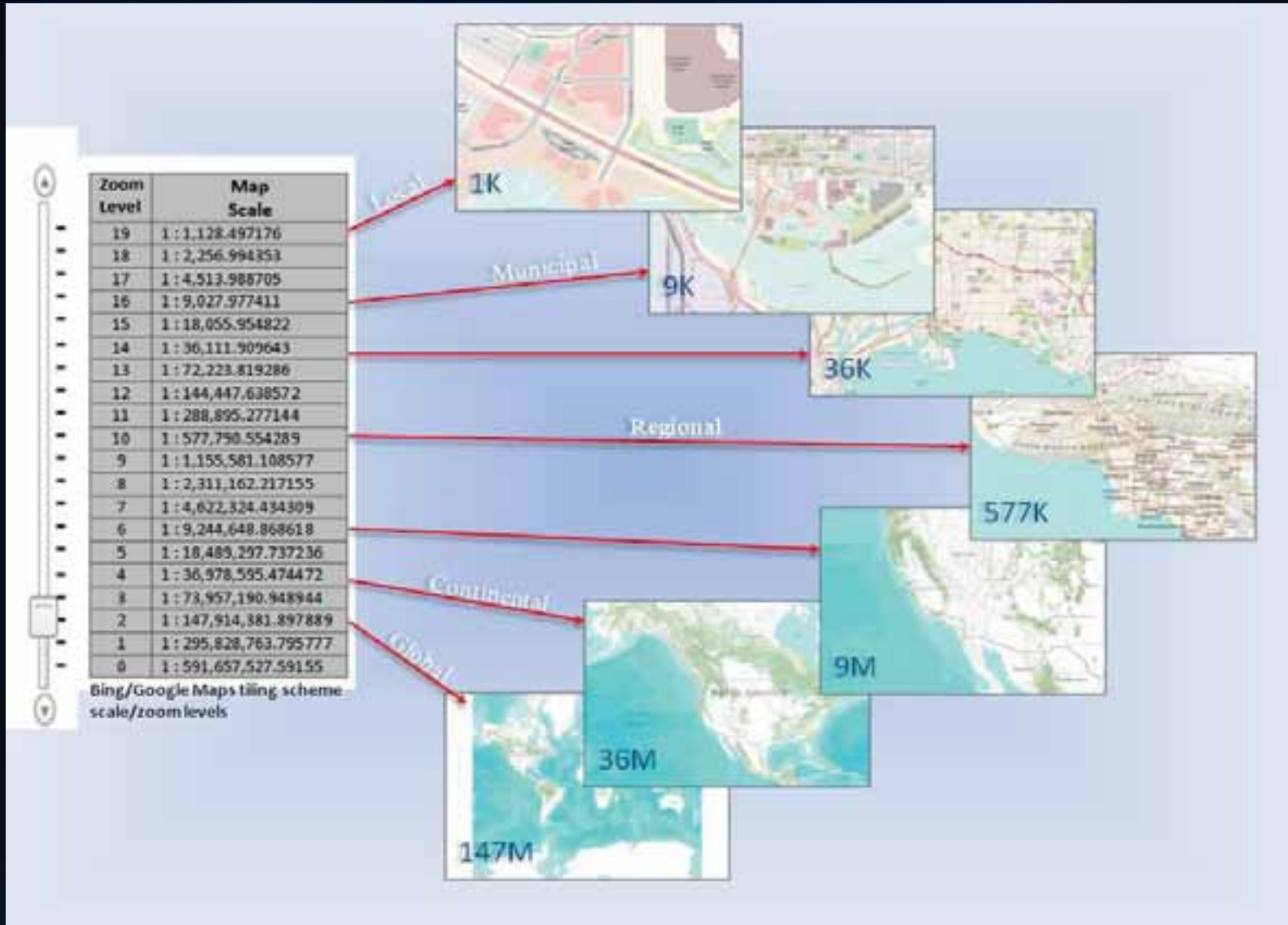# World Topographic Map Status

Coming Soon…

- ## USA and Europe down to 4.5k
  - Using Commercial Sources
  - Increase Usability for Initial Contributors
  - Reduce 'Island' Participants
  - Considered *Temporary*, until Neighbors join the Program
  - Maintain Consistency with other Basemaps (Imagery, Streets)

World Topographic Map Content Levels

World Topographic Map Scales and Levels

Benefits of Participation

- **Detailed Basemap for Your Community is Online**
  - High-quality cartography with your accurate data
  - High-performance and availability service
  - No hosting costs or support required from provider

- **Basemap is freely available to ArcGIS and Web users**
  - Use in your ArcGIS maps and apps
  - Use in your public facing Web apps

- **Developer APIs freely available to build Web Apps**
  - REST, JavaScript, Flex, Silverlight APIs available
  - Combine your map services with community basemap

How to Participate in the Community Basemaps

Help Us Make Community Basemaps better with Your Data

- **Goal is to Blend Your Local, Authoritative Data into the Appropriate Community Basemap**
  - Improve the basemap with better data

- **Identify Community Basemap(s) you can Support**
  - World Imagery, World Topo Map

- **Get Started by Contacting Esri and Sharing Info**
  - Visit us at **www.esri.com/communitymaps**
  - Complete **participation form** on Community Maps site
  - Provide permission for Esri to use data in the online map

World Imagery – What is Needed?

- **Natural Color Imagery that is More Recent and/or Higher Resolution than what is currently available**
    - 1m or better imagery where only 15m is now available
    - More recent imagery than what is currently available
    - Get latest info for World Imagery map on ArcGIS.com

World Imagery Collection
High-Resolution Imagery

World Imagery – How to Participate

1. **Provide Source Imagery for Your Area**
   - Deliver Imagery in GeoTIFF format
   - Ship or FTP Imagery to Esri-Redlands
   - Provide Metadata for Imagery (Date, Res, Accuracy)

2. **Esri will Generate Map Cache of Imagery**
   - Cache Map using [Bing/Google Tiling Scheme](#)
   - Esri can Provide Map Cache back to Provider

3. **Publish Map to ArcGIS Online**
   - Esri will blend imagery with other bordering area
   - Esri will Publish Map Cache to Online Servers
   - Updates made on a semi-annual basis (Q2/Q4)

World Topographic Map – What is Needed?

- **Basemap Data to Expand Topo Map Globally where detailed data is not currently available**
  - **Local City / Regional Data for North America and Europe to Add Detail from ~1:20k down to ~1:1k scale**
  - **National Data from ~1:150k down to ~1:20k scale**
    - **See United States and Canada for Published Examples**

Sample Local Map

Sample National Map

World Topographic Map

Required and Preferred Data Layers

National Map (1:150k – 1:20k)	Local City Map (1:20k – 1:1k)
Admin Boundaries	Admin Boundaries
Cities	Parcels
Roads	Roads
Land Cover	Building Footprints
Landmark Areas	Landmark Areas
Parks	Hydrography
Building Footprints	Railroads
Hydrography	Parks
Railroads	Neighborhoods
	Vegetation
Hillshade (Elevation)	*Hillshade (Elevation)*
Contours	*Contours*
Landforms	*Landforms*

Topographic Map – How to Participate

1. **Author Map for Your Area**
    - **Download Appropriate Topo Map Templates**
    - **Assemble Necessary Data Layers**
    - **Author Multi-scale Map in ArcGIS Desktop**

2. **Cache Map for Your Area**
    - **Coordinate with Esri on Specific Area to be Cached**
    - **Cache Map using Bing/Google Tiling Scheme**
    - **Publish Test Service of Map Cache for Review**

3. ***Publish Map to ArcGIS Online**
    - **Ship or FTP Map Cache to Esri-Redlands**
    - **Esri will blend tiles with other bordering maps**
    - **Esri will Publish Map Cache to Online Servers**

    Content Sharing Agreement!
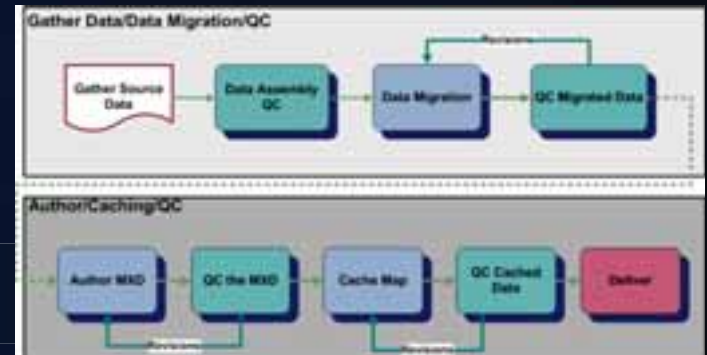
Topographic Map – How to Participate

Attend Free Training

- **Instructor-led Virtual Workshops**
  - *Sign up online - training.esri.com "community"*
  - *Next Class is April 5-6*

- **Cartographic Production Workflow**
  - Map Templates
  - Data Inventory
  - Data Migration
  - Map Authoring
  - Caching and Quality Control

Community Maps Tracking Production

Web-Deployed Workflow Manager Application

Participants keeping Esri up to date on their progress.

communitymaps.arcgis.com

Login provided to registered participants

Community Maps Resource Center

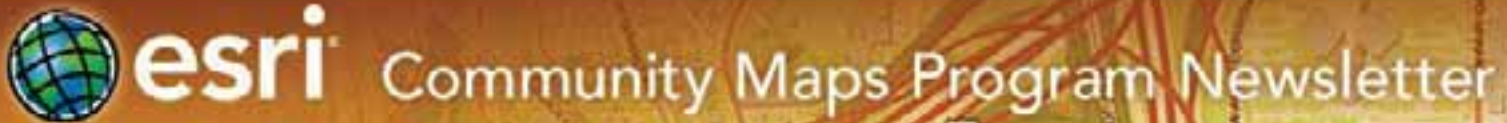**Online resources to participate in community basemaps**

Quick Tour of the Community Maps

Resource Center

resources.arcgis.com

Community Maps Newsletter

Stay in touch with the latest news on the program

- **Highlight Contributions**
- **Updates to Resources (tools, templates, etc)**
- **Tips and Tricks**
- **Latest Events & Training**

View at:

http://www.esri.com/news/publications/newsletters.html

Subscribe at:

http://www.esri.com/publications/apps/newsletters/pub_form.cfm

Frequently Asked Questions

- **Can provider build web apps using the online map?**
  - Yes, the map and developer APIs are freely available to provider.

- **Is Esri generating revenue from the use of our data?**
  - No, the maps are freely available to ArcGIS users.

- **How do we keep the map updated?**
  - Map is updated based on contributors needs (monthly/quarterly/*annual)
  - Submit whole or partial cache of area

Frequently Asked Questions (continued)

- **Who owns the data that is contributed through the community maps program?**
  - The data provider retains all ownership of data. Esri requests permission to publish map cache of data.

- **Will the map service be reliable?**
  - Yes, map hosted in commercial data centers with 24/7 support and 99.9% availability.

How to Get Started

- **Visit us at www.esri.com/communitymaps**
  - Learn more about community maps
  - See map of other users who are participating
  - Submit participation form to get started

- **Contact Community Maps Team**
  - Email us at:
    - online_content@esri.com
    - communitymap@esri.com

Contributor Presentations

City of Carson

City of Rancho Cucamonga