



**Geothermal**  
Collegiate Competition

U.S. DEPARTMENT OF ENERGY

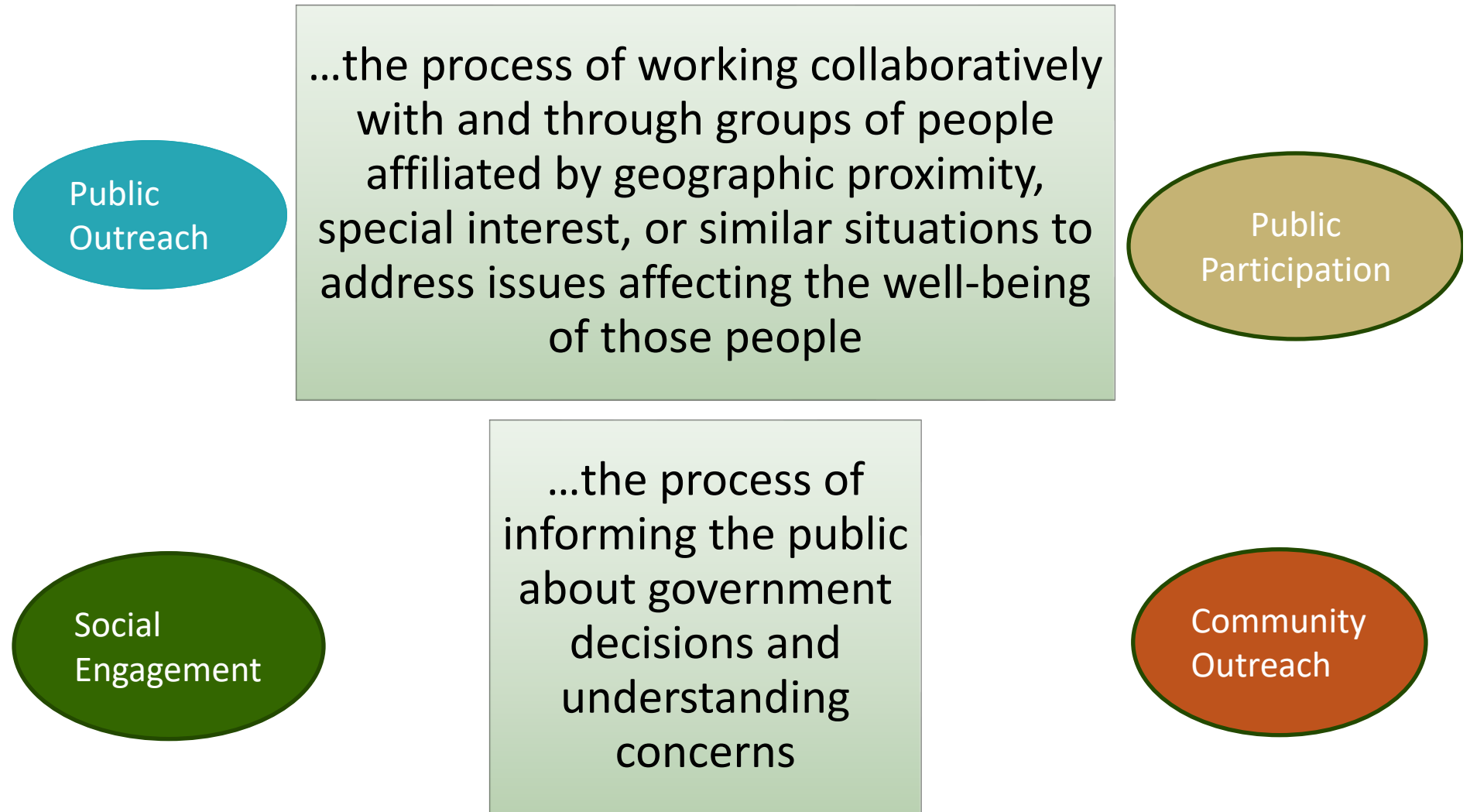
# Ethical and Responsible Public Engagement

Laurie Hietter  
November 3, 2021

# Today's Webinar

- 1 Background
- 2 Outreach principles
- 3 Methods
- 4 Tips for success
- 5 References

# What is Public Engagement?



# Geothermal Electricity Generation



Flash Steam

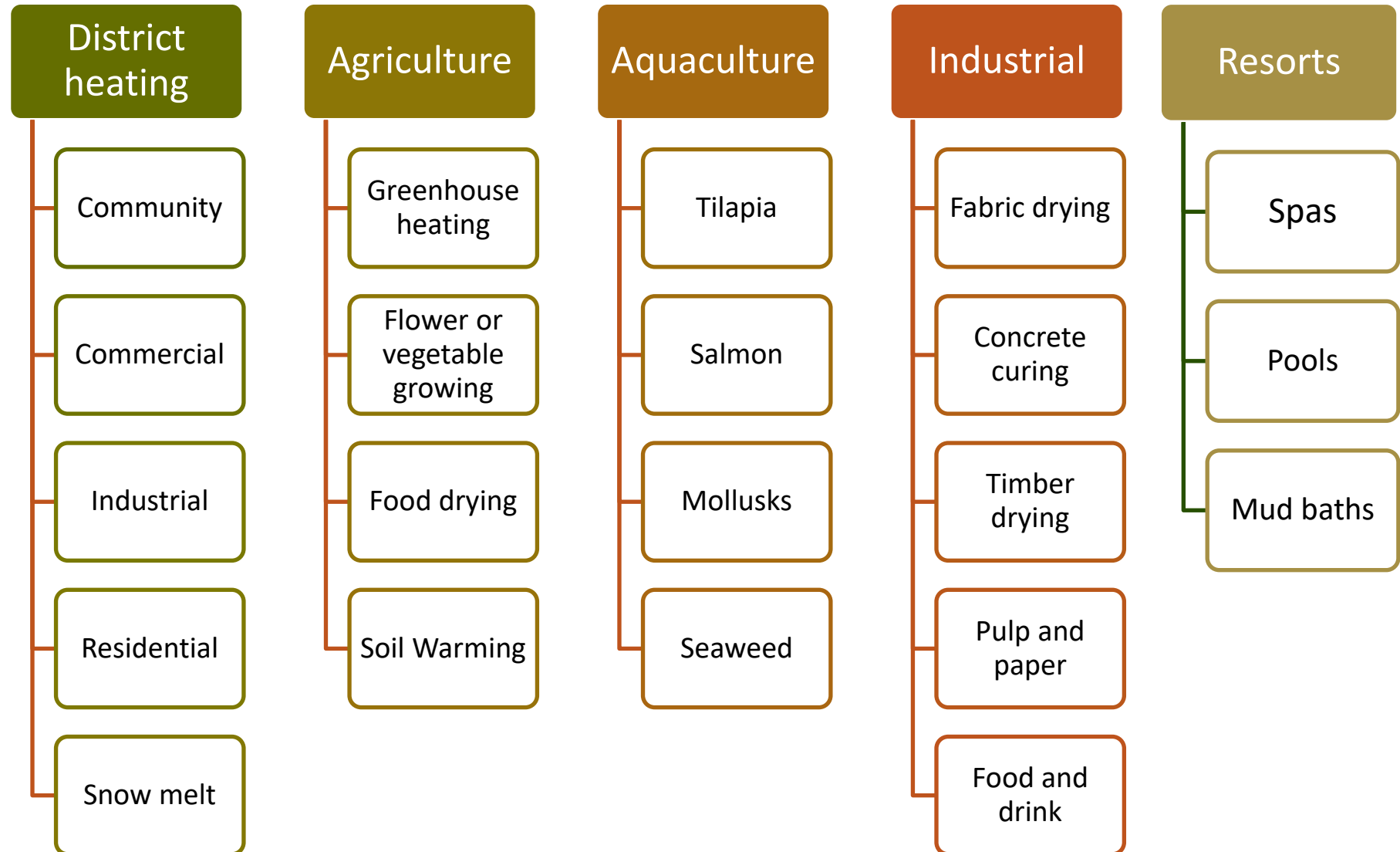


Binary



Well-head  
generators

# Geothermal Direct Use





# Phases of Geothermal Development

## Exploration

Hydrogeology studies  
Well pads  
Slim holes  
Large wells  
Roads



## Development and Utilization

Production wells  
Pipelines  
Power plant  
Transmission line



Power plant operation  
Maintenance  
Infill drilling



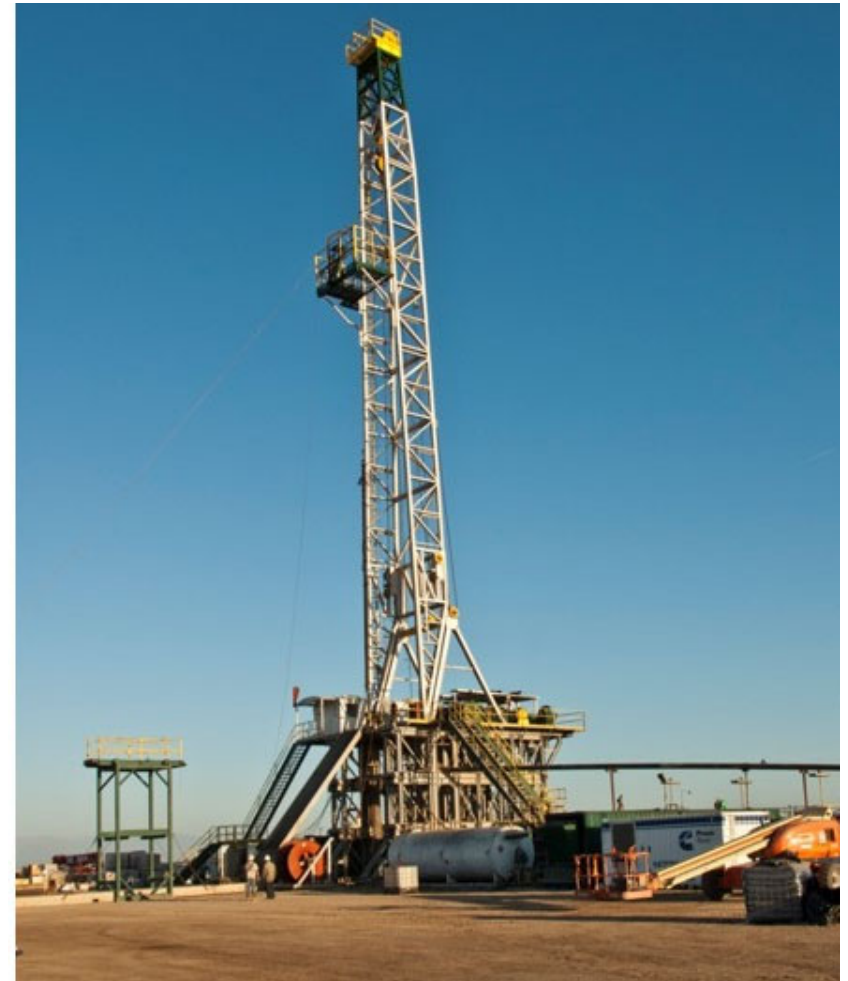
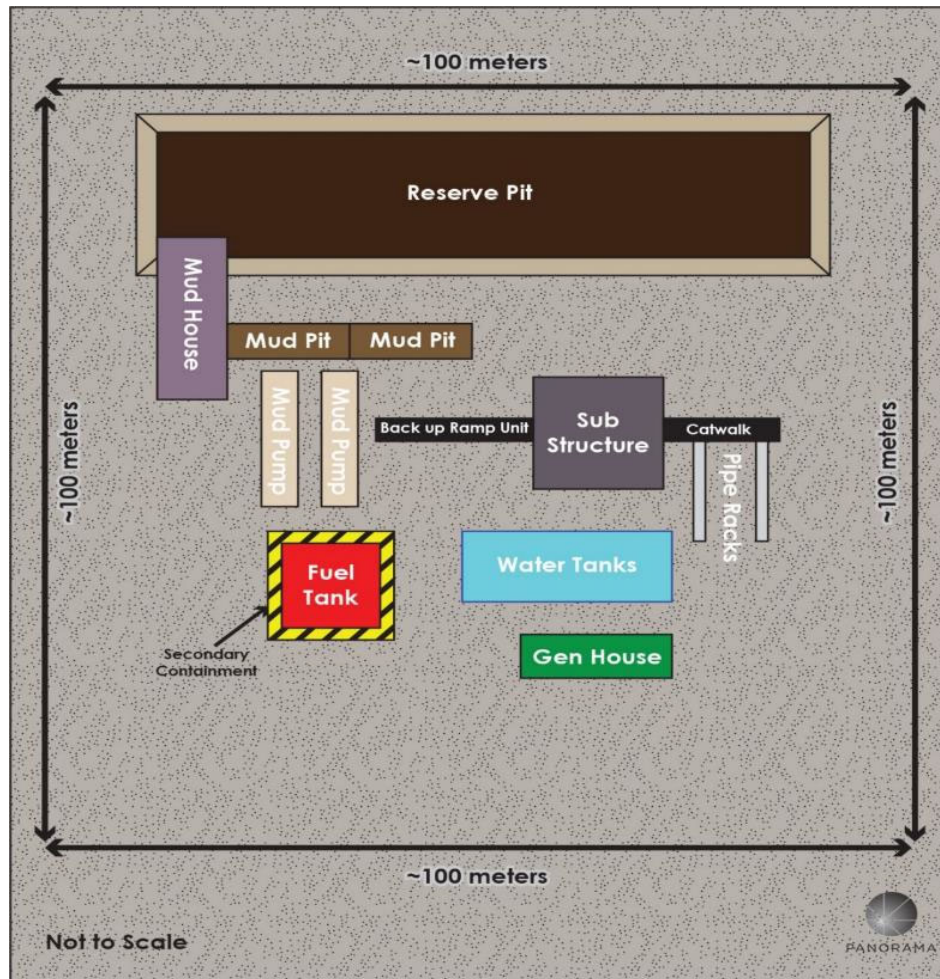
# Shallow Drilling

- Smaller rigs
- Less disturbance
- Temperature gradient wells
  - Temperature with depth
  - Resource temperature
- Core holes
  - Geology
  - Faulting





# Typical Deep Well Pad Layout





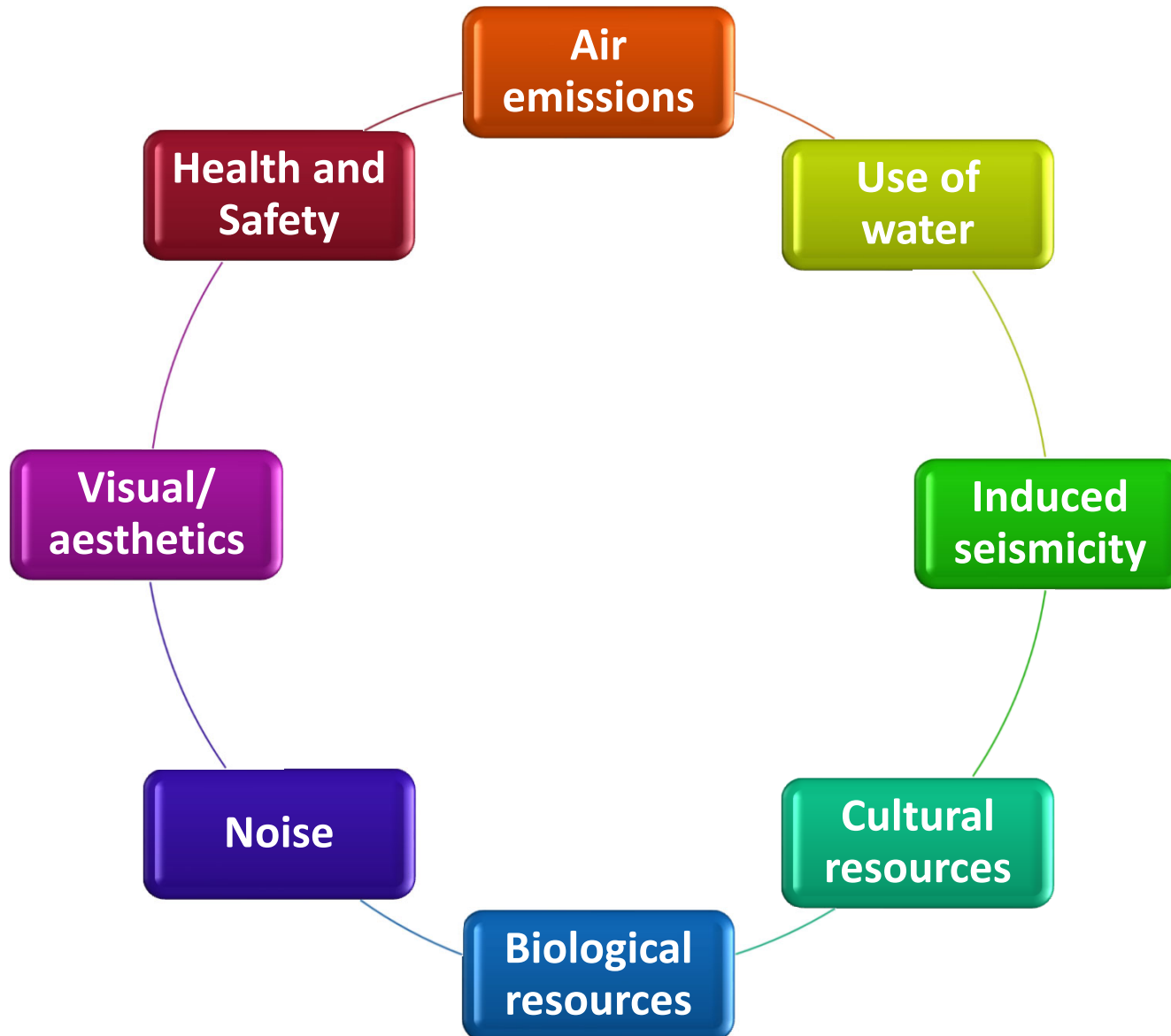
# Surface Disturbance

Facility	Area (acres)
<b>Wells</b>	
Temperature Gradient wells	1
Well pads	1 to 4
Well Field	2 to 20
Pipelines	2 to 8
<b>Power Plants</b>	
30 MW	15
50 MW	25
<b>Transmission</b>	
5 mi	24
30 mi	240

Phase	Acres
Prelim Exploration	2 to 8
Exploration (4 pads)	24
Development and Utilization (30 to 50 MW plant)	20 to 141

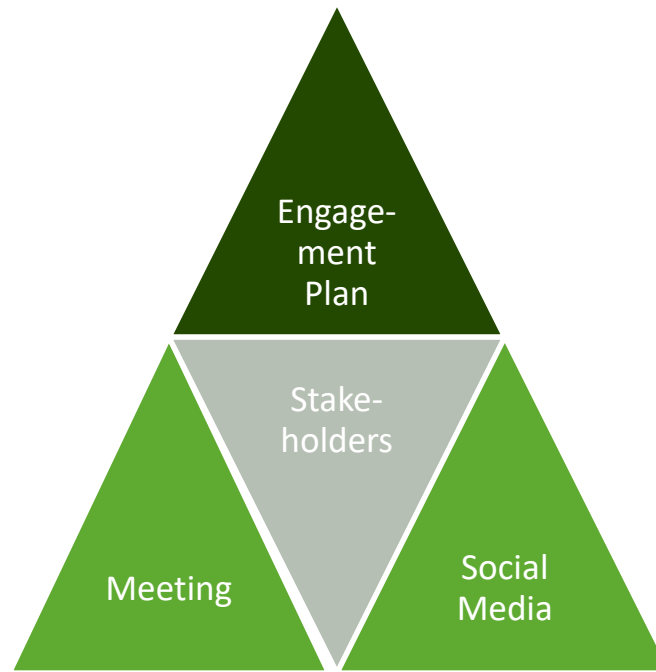
Source: GEA

# Common Environmental and Stakeholder Issues



# Impact Mitigation

1. **Avoiding** the impact altogether by not taking a certain action or parts of an action.
2. **Minimizing** impacts by limiting the degree or magnitude of the action and its implementation.
3. **Rectifying** the impact by repairing, rehabilitating, or restoring the affected environment.
4. **Reducing or eliminating the impact over time** by preservation and maintenance operations during the life of the action.
5. **Compensating** for the impact by replacing or providing substitute resources or environments



# Public Engagement Methods



# Why Engage the Public?

## Build Consensus

**Understand and address** public, agency, tribal concerns

**Comply** with regulatory requirements

**Identify** stakeholders, concerns, impacts and issues

**Provide accurate information** about the project

**Resolve conflicts** to expedite permitting

**Avoid** project challenges

# Regulatory Requirements

## Federal

- National Environmental Policy Act (NEPA)

## State

- State environmental regulations

## Local

- Permit acquisition process (air, water, waste, etc.)

# Cultural and Tribal Resources Protection

Archaeological Resources Protection Act (ARPA)

National Historic Preservation Act (NHPA)

National Environmental Policy Act (NEPA)

Native American Graves Protection and Repatriation Act (NAGPRA)

American Indian Religious Freedom Act (AIRFA)

Federal Land Policy and Management Act (FLPMA)

Executive Order 13007 "Indian Sacred Sites"

Executive Order 13175 "Government-to-Government Relationship"

DOI Tribal Consultation Policy

DOI Secretarial Order No. 3317 Meaningful Consultation

DOI Consultation Policy for Alaska Native Corporations

# A Word about Ethics

- Accuracy
- Honesty
- Inclusiveness
- Thoroughness
- Reputation
  - Yours
  - Institution
  - Company
  - Community

**All are necessary for a sustainable program**



# Outreach Principles



Educate

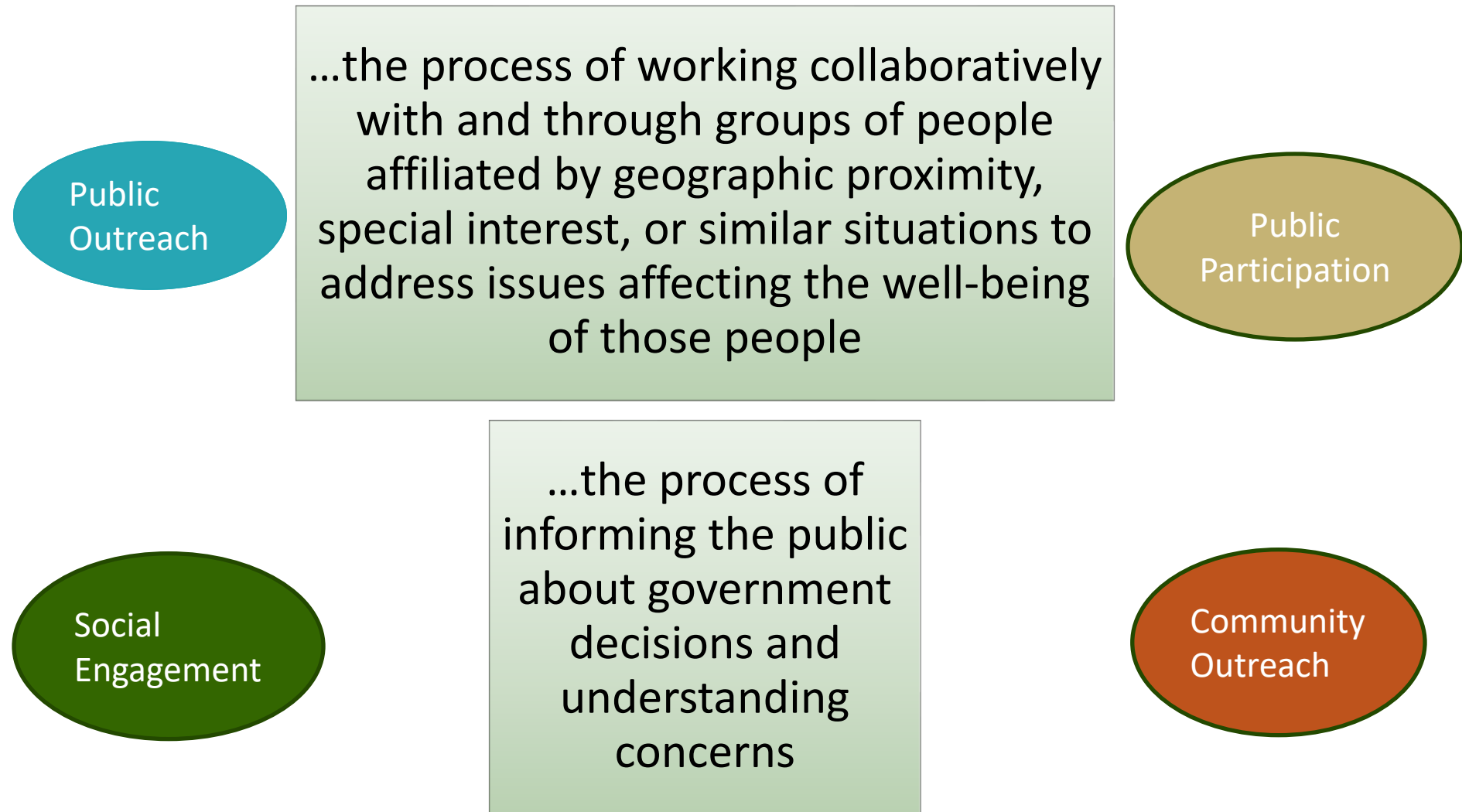
Establish  
Relationships

Maintain  
Communications

Acknowledge  
and Address  
Impacts

Monitor,  
Analyze,  
And Publish  
Data

# What is Public Engagement?



# Outreach Principles

## Educate

- Project
- Goals
- Benefits
- Impacts
- Protections

## Communicate

- Identify needs and concerns
- Follow up
- Not one and done

## Relationships

- Build trust
- For the long term

## Impacts

- Identify
- Acknowledge
- Avoid/Lessen

## Monitor

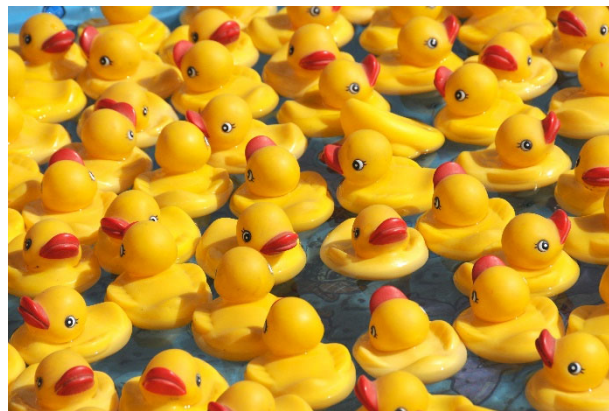
- Adjust as needed
- Communicate results



# Identifying Stakeholders



*Who is THE PUBLIC?*





# Identifying Stakeholders

- Government
  - Permitting agencies
  - Affected department staff
  - Elected officials
- Community
  - Adjacent property owners
  - Neighbors
  - Homeowner associations
  - Community groups
  - Schools

# Identify Stakeholders and Issues



# Typical Questions

## General Project Questions

- Where is the project?
- Who is proposing this project?
- Who is paying for this?
- How long will it take to build?
- How many jobs will there be?
- Is this a union job?
- Why do we need this?

# Typical Questions

## Air emissions

- What are the emissions?
- Will I smell hydrogen sulfide?

## Hydrology

- How much water will be used?
- Where will you source the water?
- Will the springs dry up?

## Induced seismicity

- Will the drilling or extraction cause earthquakes?

## Cultural resources

- Will the excavation affect tribal or cultural resources?

# Typical Questions

## Biological Resources

- Will endangered plants or animals be affected?
- Will the project effect wetlands?

## Noise

- How much water will be used?
- Where will you source the water?

## Health and Safety

- Will the project cause a well blowout?
- Are the emissions dangerous?

## Visual and Aesthetics

- What will the project look like?
- Can I see it from a scenic roadway?

# Timing and Outreach Opportunities

## **Project Definition Pre-Environmental Review**

- Agencies and tribes first
- Hold initial meetings with neighbors/public
- Develop a contact list
- Newsletters

## **Environmental Review**

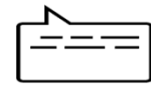
- On-going contact with agencies
- Public meetings, workshops, and hearings
- Website or social media for public
- Newsletters

## **Construction and Operations**

- Data sharing with public and agencies
- Site tours and ongoing education
- Hotlines for public concerns
- Newsletters

# Outreach

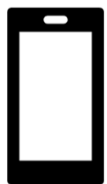
- Involve and update the public and agencies
- Hold public meeting at scoping to present
  - Project
  - Process
  - Measures to reduce effects
- Use appropriate media for community
- Inclusive and culturally appropriate communication





# Notifications and Communication

- Stakeholder list
  - Develop a stakeholder list with contact information
    - Assessor's parcel list
  - Database
    - Google Docs
  - Update it as needed
- Notifications
  - Newspaper
  - Direct mailing (folded single page, postcard)
- Social media
  - Website
  - Facebook
  - Twitter
  - Instagram



# Outreach by Audience

## Agency Staff

- Solicit input early
- Communicate often
- Share results
- Communicate mitigation plans
- Be prepared for technical staff

## NGOs and Public

- Educate on benefits and impacts
- Present information understandably
- Listen to concerns and address directly
- Be understanding and non-confrontational

## Tribes

- Government-to-government consultation
- Meetings with tribal staff
- Cultural concerns and differences
- Ethnographers
- Site visits
- Document consultation and meetings

## Governments Representatives

- Establish relationships
- Prepare concise informational materials
- Take on site tours
- Provide feedback on regulatory process

Document all of your meetings and communications

# Types of Meetings

- Public community meetings
  - Open house
  - Presentations
  - Homeowners' associations
  - Key community influencers
- Governmental agency staff meetings
  - Meet with regulatory staff to introduce the project and identify issues
- Non-governmental organization meetings
  - Separate meeting if NGOs express concerns

## Structure Productive Meetings

- Agendas
- Sign-in method
- Set the ground rules
- Civility at all times
- Keep to schedule
- Take notes and document
- Follow up

# Traditional Meeting



# Open House

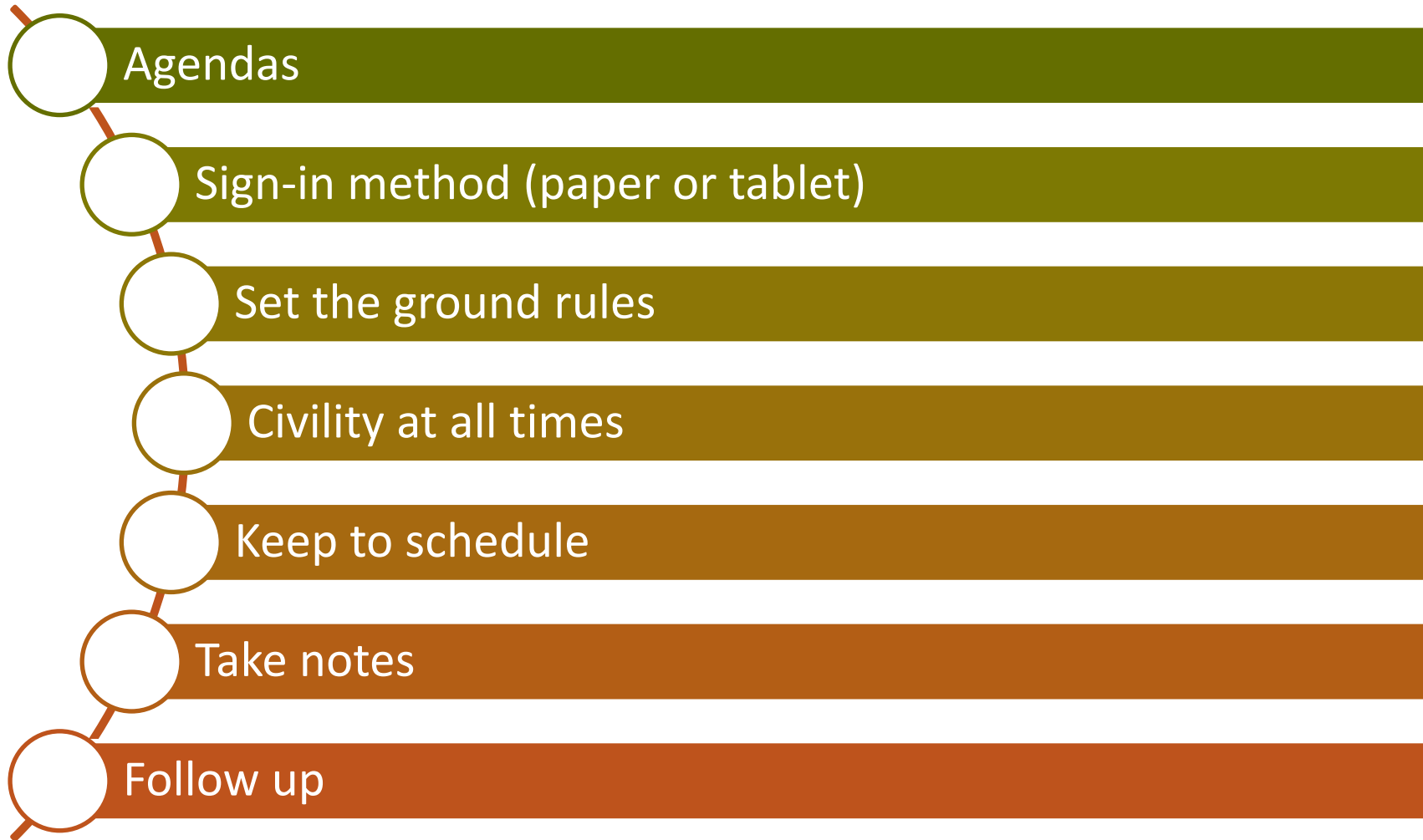


# Comment Walls





# Structure Productive Meetings



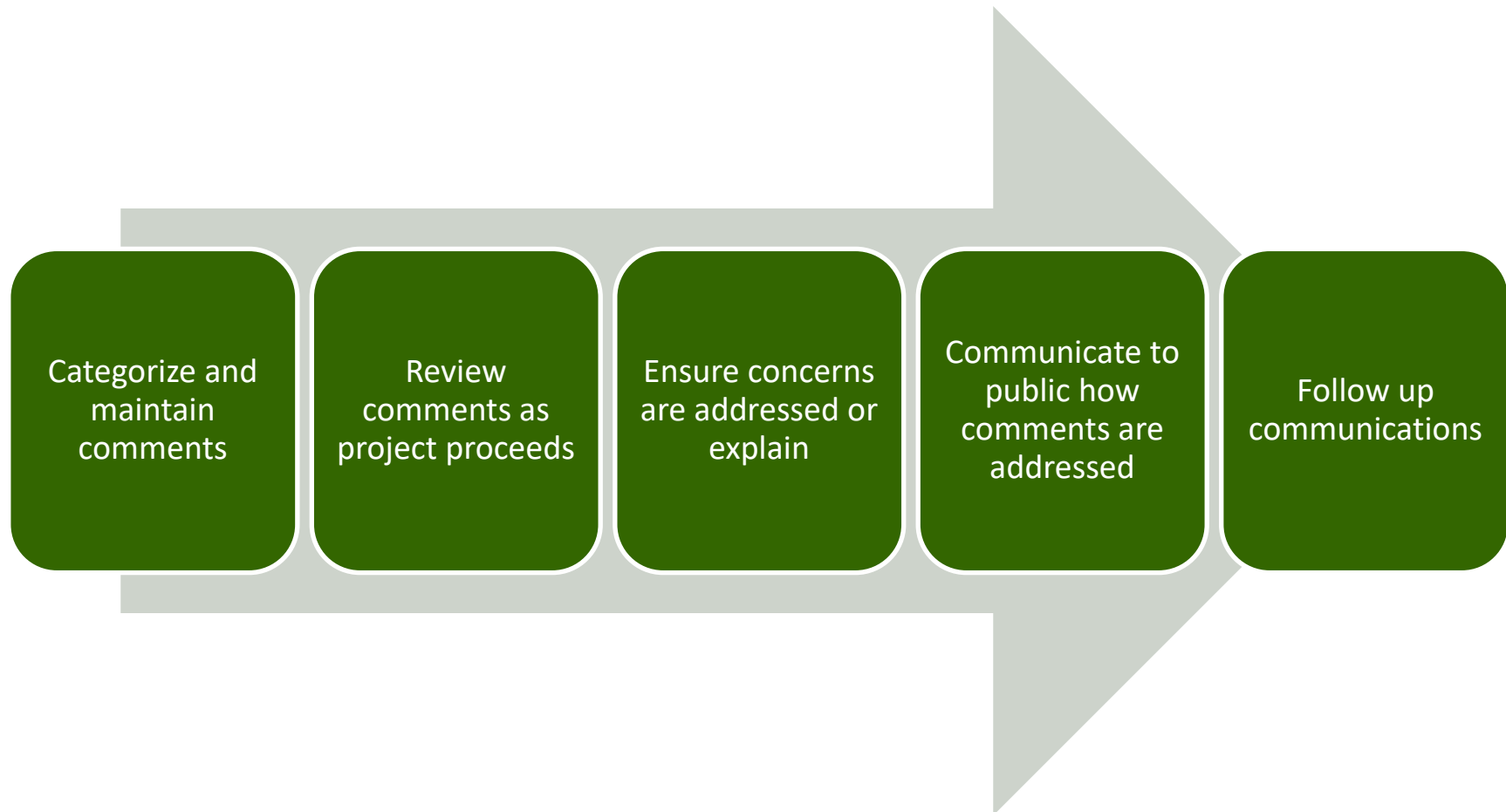
# Meeting Agendas

- Introduce participants
  - Ground rules if the meeting is large or controversial
- Describe project
  - Location (map and photos)
  - Who is proposing
  - Types of facilities to be built
  - Map and scope of surface disturbance
  - Environmental protection measures
  - Schedule
- Discuss environmental review and permitting process
  - National, tribal, state, local
- Public Comments
  - Comment cards

# Social Media

- Websites can be primary sources of information
- Check with sponsor, funding, applicant about using social media
- Determine
  - *Which social media platforms will be used?*
  - *What platforms do the community prefer?*
  - *What information will be disseminated?*
  - *What does not get posted to social media?*
  - *How frequently will information be posted?*
  - *Interactive or static?*
- Identify community notification preferences
  - Through a postcard mailer
  - Social media
  - At a meeting

# Managing and Tracking Comments



# Stakeholder Engagement Plans

## Develop a plan to be your road map

- Definitions
  - Project overview
  - Stakeholders
  - Objectives of engagement
  - Team participants
- Engagement Methods
  - Stakeholder tracking
  - Consultation plans
  - Meetings
  - Website
- Additional Tools
  - Fact sheet
  - Frequently asked questions (FAQs)
  - Posters, maps, sign-in sheets, notices
- Plan Updates and Comment Tracking

# Stakeholder Engagement Plans

## 1. Introduction and Project Description

*Who, what, where, why, when*

## 2. Public Consultation Regulations and Requirements

*What are the statutory requirements?*

## 3. Stakeholder Identification, Stakeholder Inventory

*Communities to engage—nearby, along access routes, NGOs*

*Key leaders to engage—community, NGO, government agency staff*

*Company representatives—maintain a consistent face of company*

*This is a  
living document*



# Stakeholder Engagement Plan (cont.)

## 4. Methods

### A. Methods for Information Dissemination and Public Consultation Communication

1. Notices, website, media, radio, social media
2. Meetings—one-on-one, small groups, town halls
3. Data sharing—agencies

### B. Issues Scoping

*How will you identify the issues?*

### C. Environmental Documents Review

*Who will prepare and review the environmental doc?*

### D. Construction and Operations

*How will you communicate with the public during construction and operation?*

# Stakeholder Engagement Plan (cont.)

## 5. Schedule and Timetable

*Planning for all activities*

## 6. Resources and Responsibilities

*Roles and Responsibilities*

## 7. Grievance Mechanism

*Consistent company representative*

*Define leaders in community to participate*

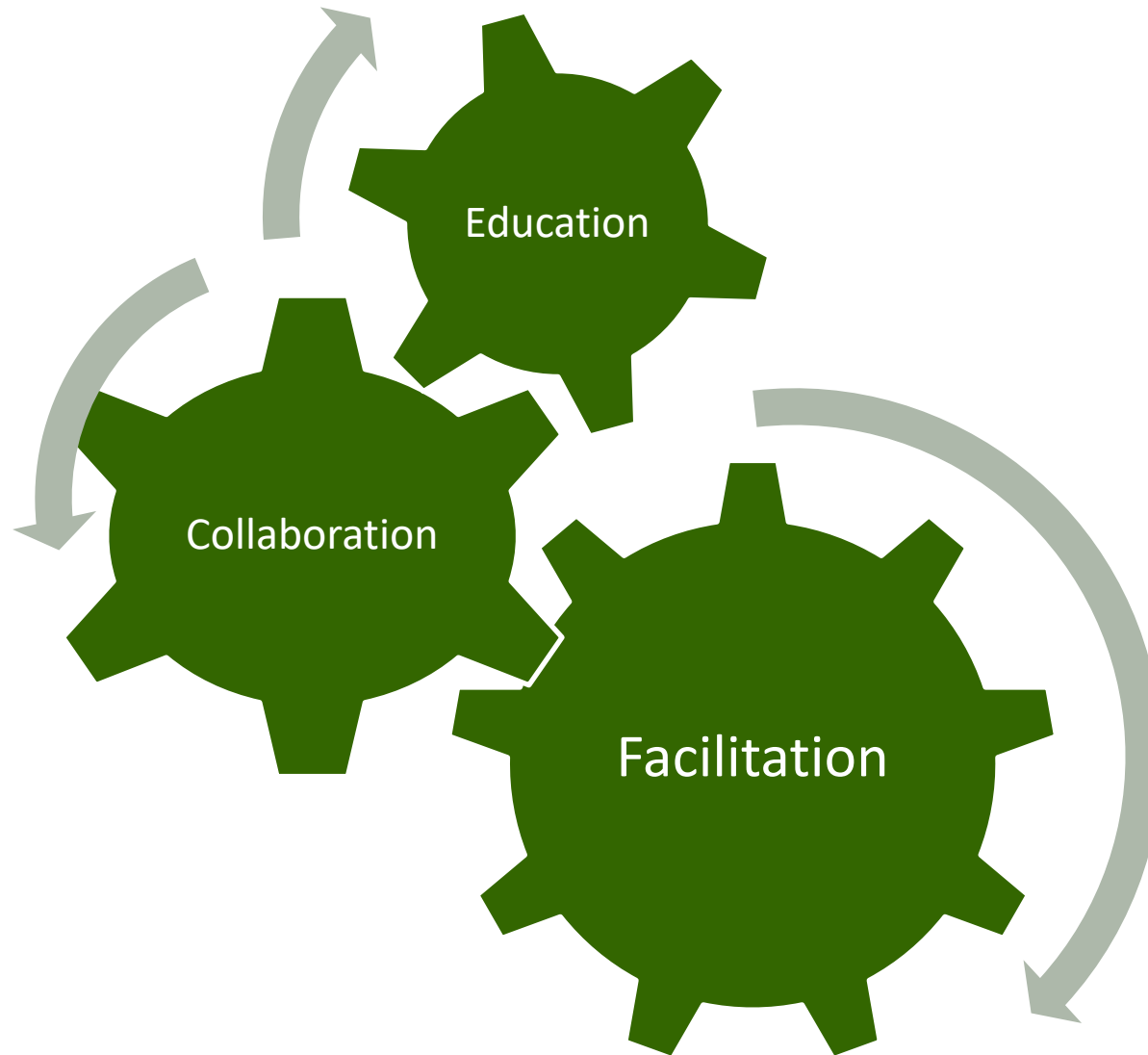
*Include women*

## 8. Monitoring and Reporting

*Does an agency or funding source require monitoring and reporting on public outreach?*

*What are the methods?*

# Successful Public Engagement



# Tips for Success

## Identify applicable regulations

- National regulations
- Ministries
- Local
- Funding

## Identify stakeholders

- Agencies
- Local communities and businesses
- Community leaders and groups
- NGOs

## Communicate plans

- At initiation
- Regularly thereafter

## Follow up

- Consistent communication
- Accuracy and honesty
- Meet commitments
- Manage expectations

**EARLY**

**OFTEN**

**INCLUSIVE**

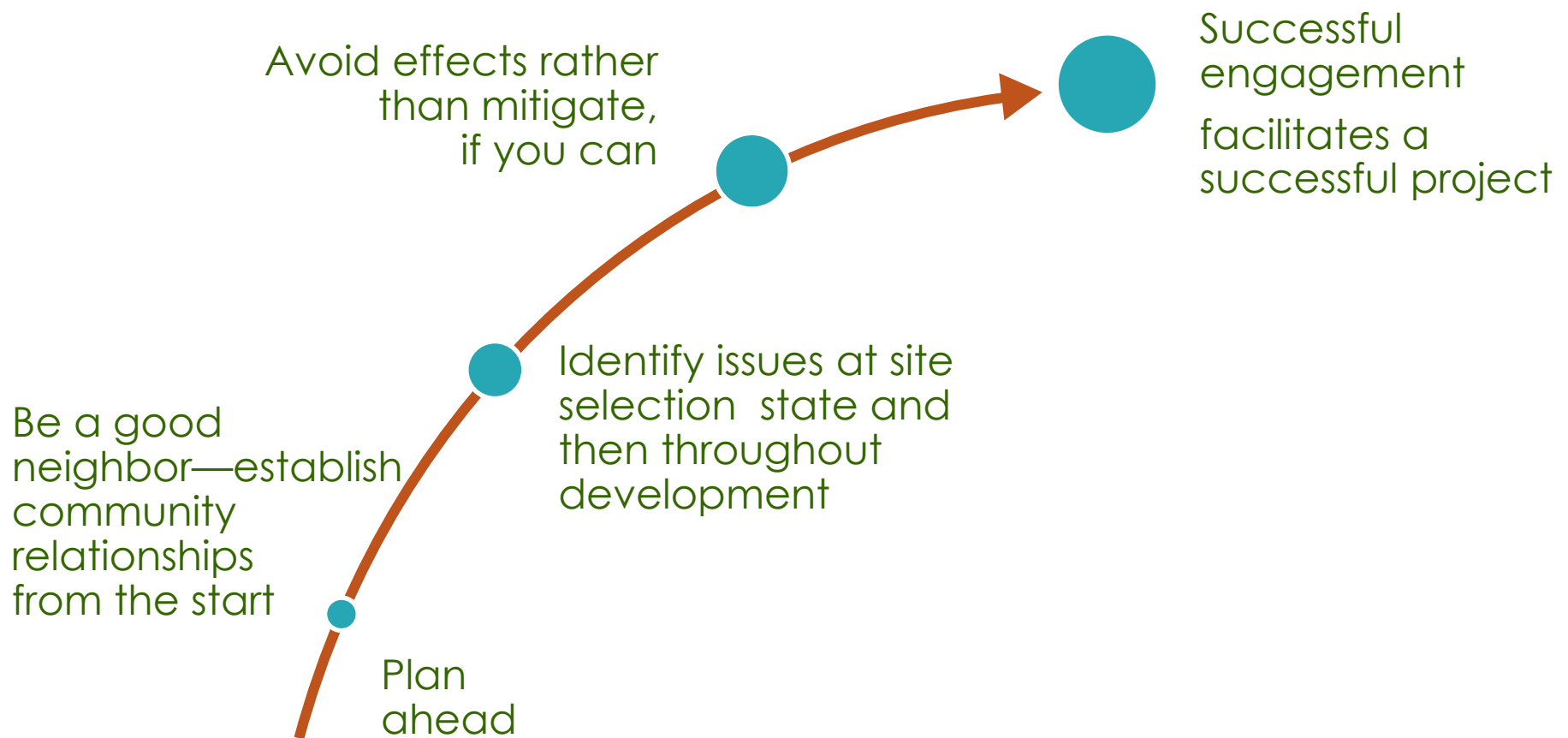
**EXPERTS**

**CONSENSUS**

**SUCCESS**

# Plan Ahead for Success

**Plan ahead and remember—  
community engagement is an on-going process!**



# References

## Geothermal Public Outreach Guides

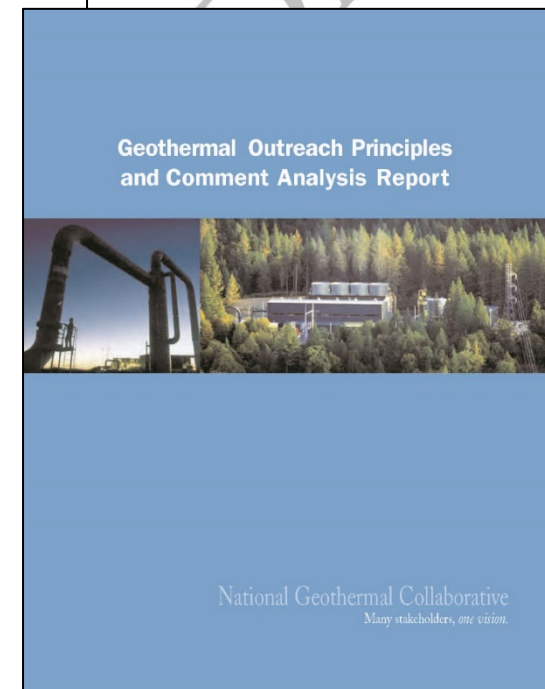
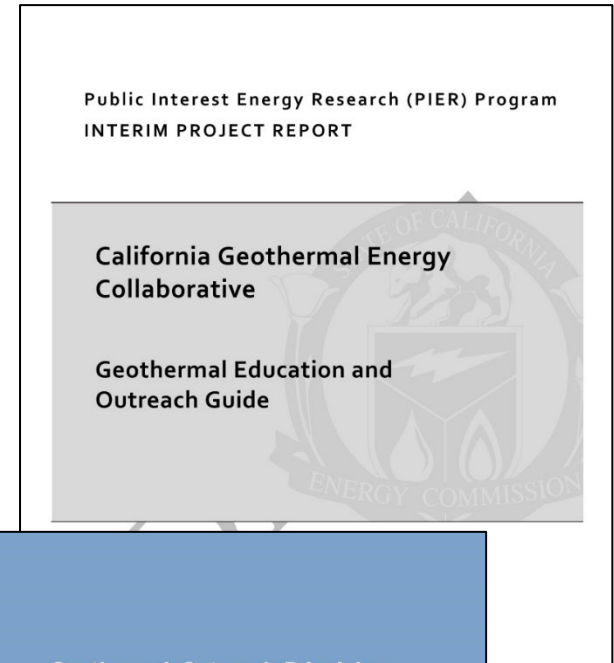
### ***2011 Geothermal Education and Outreach Guide***

California Energy Commission Publication  
How-to for public outreach

<https://californiaenergycommissionlibrary.on.worldcat.org/v2/oclc/1029566862>

### ***2005 Geothermal Outreach Principles and Comment Analysis Report***

National Geothermal Collaborative Publication  
Eight geothermal projects  
Technical analysis of public comments  
Development of outreach principles





# Questions



Laurie Hietter

650.269.6927

[lauriehietter@gmail.com](mailto:lauriehietter@gmail.com)