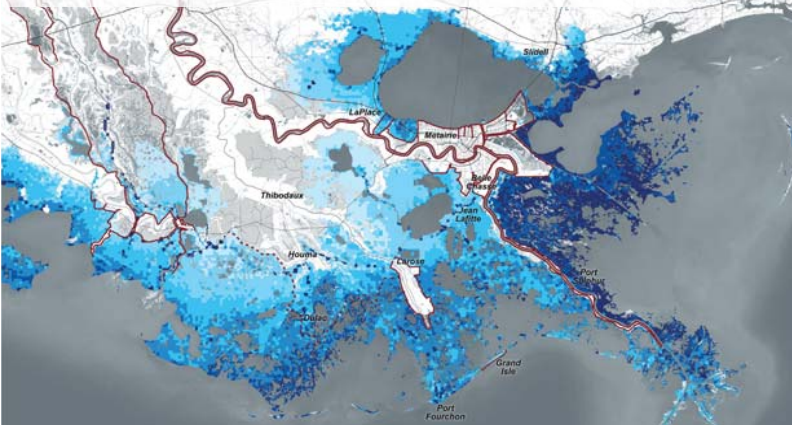


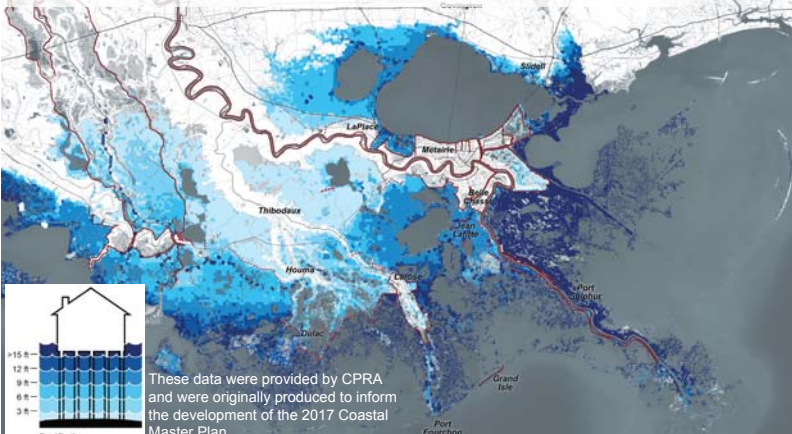
1960 Land



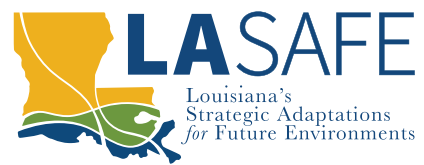
2017 Land Loss & Flood Risk



2067 Land Loss & Flood Risk



These data were provided by CPRA and were originally produced to inform the development of the 2017 Coastal Master Plan.



LA SAFE OVERVIEW

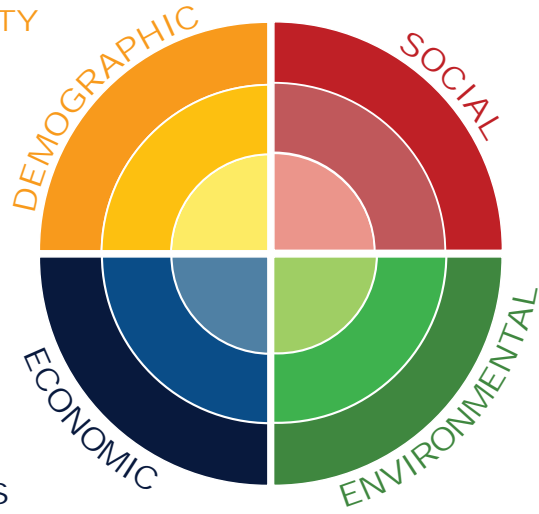
LA SAFE is an approach to planning for future risk, using planning expertise, science, and community input to envision the future of southeast Louisiana. When the plan is complete, we will begin implementation with pilot projects to demonstrate adaptive strategies that will help decrease flood risk for the Louisiana coast.

HOLISTIC APPROACH

Increasing flood risks and environmental challenges lead to changes in population, culture, economy, and education. To address these challenges, we are collecting data and perspectives to find adaptation strategies that can provide multiple benefits across community life.

SOCIAL VULNERABILITY
POPULATION SHIFTS
AGE + DIVERSITY
HOUSING
INCOME

TAX BASE
REAL ESTATE
JOBS + INDUSTRY
FISHING + FARMING
COMMUTER PATTERNS



HEALTH + SAFETY
ORGANIZATIONS
EDUCATION
CULTURE
POLITICS

POLLUTION
SUBSIDENCE
LAND CHANGE
SEA LEVEL RISE
HABITATS + RISK

CONNECTING LOCAL TO REGIONAL

The six LA SAFE parishes - Jefferson, Lafourche, Plaquemines, St. John the Baptist, and Terrebonne - will develop plans that include programs, policies, and projects to support southeast Louisiana communities over the next 50 years.

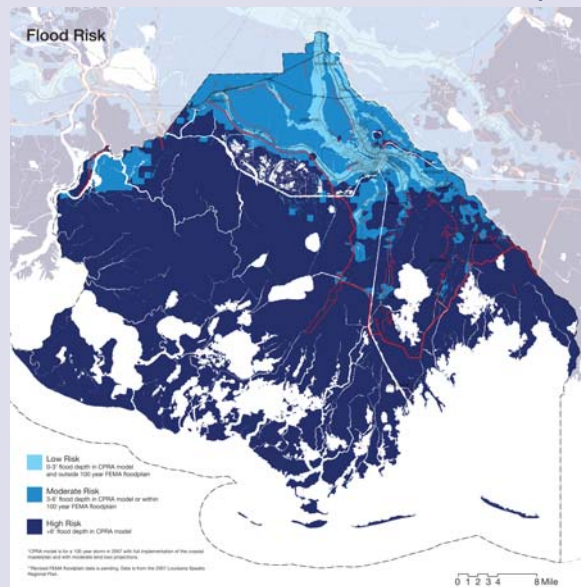
So far, more than 1,500 residents discussed issues related to stormwater management, transportation, and development policy that affect their communities. Through this process, local, regional, and state-scale solutions emerged, as well as ways for governments to coordinate across political boundaries.



BIG PICTURE VISION

A 50-YEAR VISION FOR TERREBONNE PARISH AND ITS DIFFERENT RISK AREAS

What we expect over 50 years:



LOW RISK AREAS

Minimal flood risk
Economic growth
Population increase

MODERATE RISK AREAS

Land loss in surrounding areas
Moderate local flood risk
Not much change in population

HIGH RISK AREAS

Land loss
High flood risk
Decline in population

VISIONING AROUND RISK

Low Risk: Growth and Community Character

Continue to make areas with higher ground and lower risk ready for growth by providing denser residential and commercial development, increased transportation options, improved stormwater management, and better designed green spaces.



Moderate Risk: Fishing, Recreation, and Agriculture

In moderate risk areas, continue to embrace more of a fishing and recreation economy so that both residents and visitors can enjoy Terrebonne's culture and "good earth" lifestyle.

- Protect harbors, build elevated housing and amenities close together, and create new recreational spaces, elevated evacuation routes, and more transportation options to move around the parish.
- Grow recreational and ecotourism businesses, with better support for seafood industry and coastal workers.
- Expand elevation program of pier-and-beam homes.
- Provide buyout options for primary homeowners, especially those that are more at risk of flooding (i.e., slab on grade construction).



High Risk: Camps, Fishing, and Tourism

In the area outside the levee system, help permanent residents move to safer ground and encourage secondary homes and camps for fishing, tourism, and recreation.



PARISHWIDE VISION

In 2067, Terrebonne Parish will be a resilient coastal parish. To plan and adapt for risk, the parish will:

1. **Manage water** by retaining rainwater close to where it falls. Build on the parish's culture of working and living with water where everyone has a role in managing water - the region, the parish, communities, and individuals;
2. Create **healthy and safe communities** that attract residents of all ages by focusing on public amenities, safe neighborhoods, preserving the culture, and providing a high quality of life for all;
3. Support a comprehensive and **resilient transportation system**. Create walkable communities with a transportation system that includes cars, bicycles, boats, buses, and shuttles; and
4. **Diversify the economy** and enhance workforce training opportunities. Support the parish's entrepreneurial spirit and (re)train workers. Base training on existing skills and apply those skills to work in clean energy and the coastal protection and restoration industry.

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WHAT DO YOU THINK?

PLEASE FILL OUT A SURVEY SHEET WITH YOUR COMMENTS!

EXAMPLE ADAPTATION STRATEGIES

POSSIBLE PROJECTS, PROGRAMS, AND POLICIES TO IMPLEMENT THE LA SAFE VISION FOR TERREBONNE PARISH

REDUCE FLOOD RISK BY MANAGING STORMWATER

Parishwide
All Risk Areas

Use natural processes to help manage stormwater and reduce future flood risk

- Encourage adjacent property owners to use shared areas that hold stormwater
- Create retention areas in large undeveloped areas that can also be used for recreation and education
- Develop an “Adopt-A-Ditch (or Bayou)” or “Maintain the Drain” program for individuals and groups
- Reduce paving and surfaces that create significant runoff
- Build roads, drainage, and new development using green infrastructure that uses plants and soil along with pipes to manage water and improve places

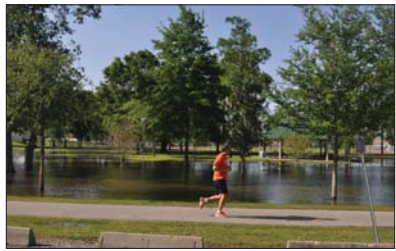


Image Credit: Wagnon and East Partners

Wally Pontiff Park in Metairie, LA, is a public park that also manages stormwater.



Image Credit: Coastal Louisiana Local Unit Board, CAPRA and Center for Planning Excellence

A conventional parking lot design contrasted with a design that manages stormwater.

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CONTINUE TO REVITALIZE DOWNTOWN HOUMA

Houma
Low Risk Areas

Take advantage of walkability, historic character, and Bayou Terrebonne to reinforce downtown as a destination

- Create a downtown plan that works with the Vision 2030 Comprehensive Plan to keep downtown vital
- Develop a downtown open space plan that connects downtown to the bayou and includes pocket parks and plazas
- Plant native trees for beauty, shade, improved air quality, and stormwater management
- Encourage walking and bicycling downtown
- Research historic tax credits for restoration
- Rehab bayou-front properties to use Bayou Terrebonne as an amenity



Image Credit: DDM Planning Studio

Looking west at a parking lot between Belanger, Church, and Main Streets in downtown Houma, and a sketch of the same parking lot used as a plaza, with outdoor seating, shade, and plantings. Belanger Street could be flexible—providing parking and seating most days, and serving as an extension of the courthouse plaza during events.



Image Credit: DDM Planning Studio

Looking east along the south side of Bayou Terrebonne from Church Street, and a sketch of the same area with outdoor seating, shade, and plantings. Revitalizing buildings along the Bayou could provide an active frontage of cafes and shops with direct access to the bayou.

UPDATE TERREBONNE PARISH ORDINANCES

Parishwide
All Risk Areas

Update ordinances to help manage stormwater, allow different types of housing, and make walking and bicycling easier

- Conduct an audit of all parish plans, ordinances, and policies to check for consistency, and change to achieve resilience goals
- Work with homebuilders, realtors, and citizens to develop ordinances that support and incentivize pier-and-beam construction rather than building on fill
- Preserve open space and minimize building in environmentally sensitive areas like wetlands
- Allow a variety of types of housing, such as mixed-use and cluster neighborhoods, townhomes, duplexes and small lot subdivisions in areas of lower risk
- Develop new areas with sidewalks, bike lanes, and trails, and add to existing streets where appropriate



Image Credit: Loggins, Eason Road Estate

A house in downtown Houma with pier-and-beam construction.



Image Credit: Street Closures America

Bike lane on Esplanade Avenue in New Orleans.

WHAT DO YOU THINK?

PLEASE FILL OUT A SURVEY SHEET WITH YOUR COMMENTS!

EXAMPLE ADAPTATION STRATEGIES

POSSIBLE PROJECTS, PROGRAMS, AND POLICIES TO IMPLEMENT THE LA SAFE VISION FOR TERREBONNE PARISH

IMPROVE PUBLIC BOAT LAUNCHES

Parishwide
All Risk Areas

Improve quality of life and support economy by upgrading boat launches

- Upgrade ramps
- Add parking
- Add other amenities where appropriate:
 - RV support
 - Shelter
 - Bathrooms
 - Fish cleaning stations
 - Commercial kitchens
- Design to fit the area's character, use green infrastructure, use renewable energy, and minimize environmental impacts
- Add more safe harbor sites throughout parish
- Build on the parish's re-established Boat Launch Advisory Committee



Fish cleaning station at Blackhawk Lake Recreation Area, Highland, WI.



Permeable pavement allows rainwater through at Gleason Boat Ramp, Portland, OR.

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UPGRADE DOWNTOWN HOUMA MARINA

Downtown Houma
Low Risk Areas

Expand and upgrade services to attract more boats

- Expand marina services to include:
 - Refreshments
 - Bait
 - Dry stack boat storage
 - Boat cleaning and maintenance
 - Showers and personal services
 - Call-ahead concierge services
- Create a marina improvement plan that includes several blocks around the marina
- Create a marketing strategy for the marina



Dry stack boat storage at the Port Marina, Fort Lauderdale, FL.



Boat maintenance services at SeaBrook Harbor & Marine, New Orleans, LA.

SUPPORT LOCAL FISHERIES

Locations to be Determined
Low or Moderate Risk Areas

Keep the commercial fishing/seafood industry viable

- Work with fishermen to expand LaTer Seafood Direct
- Expand the campaign for local fisheries marketing
- Target regional groceries and restaurants
- Include fish/seafood markets and commercial kitchens into upgraded boat launches and marinas so fishermen can add value to their catches and sell their products directly
- Help fishermen adapt to change if they move away from the water to safer areas:
 - Provide areas near boat storage to store traps and gear
 - Provide ice houses and processing plants
 - Provide help (insurance, marketing, business plans) to help fishermen expand into ecotourism, like swamp tours or charter fishing, during non-fishing seasons



Boats in Pointe aux Chenes.



Restaurant website featuring Certified Authentic Louisiana Wild Seafood.



Swamp tours are an opportunity for ecotourism available to fishermen during the off season.

WHAT DO YOU THINK?

PLEASE FILL OUT A SURVEY SHEET WITH YOUR COMMENTS!

LA SAFE wants your opinion

Thanks for taking time to fill out this short survey. We are interested in what you think about the ideas presented here today and will use your feedback to improve the parish adaptation plans we are creating. Please circle the answer that best matches your opinion. We also left space for you to provide comments, if you would like. Thanks again.

Do you agree or disagree with the following statement?

The *PARISHWIDE VISION* and Visions for *LOW, MODERATE, and HIGH RISK AREAS* are right for this parish.

Please circle one. Strongly Disagree Disagree Slightly Disagree Neutral Slightly Agree Agree Strongly Agree

Comments:

Do you agree or disagree with the following statement?

The *REDUCE FLOOD RISK BY MANAGING STORMWATER* strategy is needed in this parish.

Please circle one. Strongly Disagree Disagree Slightly Disagree Neutral Slightly Agree Agree Strongly Agree

Comments:

Do you agree or disagree with the following statement?

The *CONTINUE TO REVITALIZE DOWNTOWN HOUMA* strategy is needed in this parish.

Please circle one. Strongly Disagree Disagree Slightly Disagree Neutral Slightly Agree Agree Strongly Agree

Comments:

Do you agree or disagree with the following statement?

The *UPDATE TERREBONNE PARISH ORDINANCES* strategy is needed in this parish.

Please circle one. Strongly Disagree Disagree Slightly Disagree Neutral Slightly Agree Agree Strongly Agree

Comments:

Do you agree or disagree with the following statement?
The *IMPROVE PUBLIC BOAT LAUNCHES* strategy is needed in this parish.

Please circle one. Strongly Disagree Disagree Slightly Disagree Neutral Slightly Agree Agree Strongly Agree

Comments:

Do you agree or disagree with the following statement?
The *UPGRADE DOWNTOWN HOUMA MARINA* strategy is needed in this parish.

Please circle one. Strongly Disagree Disagree Slightly Disagree Neutral Slightly Agree Agree Strongly Agree

Comments:

Do you agree or disagree with the following statement?
The *SUPPORT LOCAL FISHERIES* strategy is needed in this parish.

Please circle one. Strongly Disagree Disagree Slightly Disagree Neutral Slightly Agree Agree Strongly Agree

Comments:

Other Comments:

Can we let you know about the next meeting? If so, tell us how to reach you.

Email and/or phone number

Name

ZIP Code (optional)

Thank you for your input!

| Response | Visions | Reduce Flood Risk by Managing Stormwater | Revitalize Downtown Houma | Update Parish Ordinances | Public Boat Launches | Downtown Houma Marina | Support Local Fisheries |
|---------------------|---------|--|---------------------------------|-----------------------------|-------------------------|--------------------------|----------------------------|
| Strongly Disagree | 1 | 1 | 1 | 1 | 1 | 2 | 1 |
| Disagree | 0 | 0 | 0 | 0 | 0 | 1 | 1 |
| Slightly Disagree | 3 | 0 | 0 | 1 | 0 | 1 | 0 |
| Neutral | 3 | 2 | 4 | 2 | 6 | 7 | 1 |
| Slightly Agree | 5 | 2 | 8 | 5 | 4 | 4 | 4 |
| Agree | 17 | 21 | 13 | 20 | 15 | 16 | 10 |
| Strongly Agree | 14 | 17 | 17 | 13 | 16 | 11 | 25 |
| Total Responses | 43 | 43 | 43 | 42 | 42 | 42 | 42 |
| | | | | | | | |
| % Strongly Disagree | 2% | 2% | 2% | 2% | 2% | 5% | 2% |
| % Disagree | 0% | 0% | 0% | 0% | 0% | 2% | 2% |
| % Slightly Disagree | 7% | 0% | 0% | 2% | 0% | 2% | 0% |
| %Neutral | 7% | 5% | 9% | 5% | 14% | 17% | 2% |
| % Slightly Agree | 12% | 5% | 19% | 12% | 10% | 10% | 10% |
| % Agree | 40% | 49% | 30% | 48% | 36% | 38% | 24% |
| % Strongly Agree | 33% | 40% | 40% | 31% | 38% | 26% | 60% |

Survey Number: 3
Zip Code: 70344
Stormwater Management: Strongly Agree
“Redirect pumping systems and relocate them.”
Update Parish Ordinances: Agree
“The commercial fishermen need help.”

Survey Number: 4
Zip Code: not given
Other:
“Put pumping station in Chauvin.”

Survey Number: 7
Zip Code: not given
Parishwide Vision: Strongly Agree
“We need to diversify badly! Can’t rely on good times when oil and gas is good.”

Survey Number: 8
Zip Code: 70363
Parishwide Vision: Agree
“Drainage to reduce land loss versus new construction.”
Stormwater Management: Slightly Agree
“See above.”
Support Local Fisheries: Strongly Agree
“Resources for sustainable fishing!”

Survey Number: 9
Zip Code: 70344
Update Parish Ordinances: no response
“I don’t know enough about the ordinances to comment.”

Survey Number: 11
Zip Code: 70363
Other:
“Strongly Agree – our parish needs improvement to keep our parish nourishing.”

Survey Number: 16
Zip Code: 70343
Update Parish Ordinances: Slightly Agree
“Building in wetlands is already a difficult process, wetland delineations and mitigation already an involved and expensive process.”
Support Local Fisheries: Disagree
“Personal experience shows that fishermen are not struggling as they portray themselves. Most make more money from oil and gas companies (mostly oyster fishermen).”

Survey Number: 21

Zip Code: not given

Update Parish Ordinances: Strongly Agree

“We need to build on higher floodplains.”

Support Local Fisheries: Strongly Agree

“Providing fishermen with alternate employment options is essential in case of another major oil spill and overfishing.”

Survey Number: 23

Zip Code: 70360

Revitalize Downtown Houma: Strongly Agree

“Downtown Houma has SO much potential!!”

Survey Number: 27

Zip Code: not given

Support Local Fisheries: Strongly Agree

“We need a collective collaboration from private and public agencies. We need communication and action instead of more studies. The time is now!!!”

Other:

“I have heard of the desire to protect our coastal parishes for over 40 years. As a child, our father (Donald P. Landry) educated us and the community for the dire need to have these issues addressed. Forty years – how much longer. Where will my own children and grandchildren be if this is not accomplished? Thank you for your efforts!!!”

Survey Number: 28

Zip Code: 70353

Other:

“Born and raised on the bayou. I have seen the land erode. I am too old to go anywhere.”

Survey Number: 30

Zip Code: 70360

Parishwide Vision: Slightly Disagree

“Controlled openings of the Morganza Spillway and Bayou Lafourche Dam will allow freshwater and sediment into the wetlands and flush out the saltwater.”

Survey Number: 33

Zip Code: not given

Parishwide Vision: Strongly Agree

“I currently live in Jefferson Parish, but each of the ideas not only make sense but appear to be do-able.”

Stormwater Management: Strongly Agree

“Main issue throughout all southern LA.”

Revitalize Downtown Houma: Strongly Agree

“It will help engage people in the local economy and community; help create a sense of ownership.”

Update Parish Ordinances: Strongly Agree

“Without doing this, it will be hard to follow along with the other steps of the plan.”

Survey Number: 38

Zip Code: 70360

Parishwide Vision: Strongly Agree

“I don’t think this approach is going to save our environment. This is strictly an adaptation approach and is only marginally helpful in addressing future risk. Adaptive strategies do not help at all unless your emphasis is on adaptive coping skills, which is a surrender approach. You get an A for effort though.”

Stormwater Management: Strongly Agree

“While managing stormwater can be helpful, focus more on managing stormwater in a serious and sustainable manner. These strategies are only the very first steps in a much more needed resource acquisition and implementation approach.”

Revitalize Downtown Houma: Strongly Agree

“I very much like your strategy here. The comprehensive plan is beautiful. I especially like the approach to rehab bayou-front properties to use Bayou Terrebonne as an amenity.”

Update Parish Ordinances: Strongly Agree

“Great approach! P.S. We have a big problem here!”

Support Local Fisheries: Slightly Agree

“This is slightly more complicated than you realize. Your points here are a little off base. While expanded use of LaTer Seafood Direct is an honorable goal, it is a very limited option. If you could please focus on providing direct case management services to help fishermen you will be headed in the right direction. Help them develop specific business plans coupled with continued identification of community leaders and development of a community organization for them.”

Survey Number: 39

Zip Code: not given

Stormwater Management: Strongly Agree

“watershed planning with regulations.”

Survey Number: 44

Zip Code: 70582

Other:

“Lower income folks are the folks most impacted by coastal changes and least able to move. None of these address directly this problem or even mention it. I would consider these folks at high risk.”

| Survey Number | Parish Vision | Storm water Mgmt | Revitalize Downtown Houma | Update Parish Ordinances | Improve Public Boat Launches | Upgrade Houma Marina | Support Local Fisheries | Other |
|---------------|---------------|------------------|---------------------------|--------------------------|------------------------------|----------------------|-------------------------|-------|
| 1 | | | | | | | | |
| 2 | | | | | | | | |
| 3 | | Y | | Y | | | | |
| 4 | | | | | | | | Y |
| 5 | | | | | | | | |
| 6 | | | | | | | | |
| 7 | Y | | | | | | | |
| 8 | Y | Y | | | | | Y | |
| 9 | | | | Y | | | | |
| 10 | | | | | | | | |
| 11 | | | | | | | | Y |
| 12 | | | | | | | | |
| 13 | | | | | | | | |
| 14 | | | | | | | | |
| 15 | | | | | | | | |
| 16 | | | | Y | | | Y | |
| 17 | | | | | | | | |
| 18 | | | | | | | | |
| 19 | | | | | | | | |
| 20 | | | | | | | | |
| 21 | | | | Y | | | Y | |
| 22 | | | | | | | | |
| 23 | | | Y | | | | | |
| 24 | | | | | | | | |
| 25 | | | | | | | | |
| 26 | | | | | | | | |
| 27 | | | | | | | Y | Y |
| 28 | | | | | | | | Y |
| 29 | | | | | | | | |
| 30 | Y | | | | | | | |
| 31 | | | | | | | | |
| 32 | | | | | | | | |
| 33 | Y | Y | Y | Y | | | | |
| 34 | | | | | | | | |
| 35 | | | | | | | | |
| 36 | | | | | | | | |
| 37 | | | | | | | | |
| 38 | Y | Y | Y | Y | | | Y | |
| 39 | | Y | | | | | | |
| 40 | | | | | | | | |
| 41 | | | | | | | | |
| 42 | | | | | | | | |
| 43 | | | | | | | | |
| 44 | | | | | | | | Y |

| | | | | | | | | |
|-------|---|---|---|---|--|--|---|---|
| Total | 5 | 5 | 3 | 6 | | | 5 | 5 |
|-------|---|---|---|---|--|--|---|---|