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Queensland Floods Commission of Inquiry
WWF submission

Inadequate planning for flood impacts

a)	the preparation and planning by federal, state and local governments; emergency services and the community for the 2010/2011 floods in Queensland.
g)	all aspects of land use planning through local and regional planning systems to minimise infrastructure and property impacts from floods

The high level of flood risk in Queensland and the inadequacies of planning arrangements to address this risk have been known for some time. The 2002 government discussion paper, *State Flood Risk Management Policy,* clearly sets out flood issues for Queensland stating:

- An estimated 100 000 plus properties are at risk from a 1 in 100 year average recurrence interval flood.
- Available legislation to deal with flood risk management is fragmented and covers a diverse range of issues.
- There is no overall state policy or guidelines for local government on how best to manage floodplains to reduce flood risks.
- Floods are probably the most predictable of natural hazards and therefore good planning and appropriate development controls by local government can be effective.

In 2003 the State Government put in place the *State Planning Policy 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide* (the SPP). This was to ensure that all future development achieved an acceptable level of flood risk. The effectiveness of the SPP has not been assessed (it is soon to be reviewed) but the impacts of the floods on new developments would suggest that it has not been entirely effective.

The recommendations of the above mentioned flood risk discussion paper were not implemented however. Therefore, the significant number of properties already exposed to unacceptable flood risk largely remained, only addressed by inadequate and inconsistent planning arrangements.

The impact of the recent floods in Queensland would likely have been far less if effective planning and mitigation mechanisms had been put in place to both reduce existing flood risk as well as to effectively ensure new developments do not increase our flood exposure.

Key flaw in the current planning arrangements include:

- Inadequate and inconsistent mapping of flood risk prevents a clear understanding of existing and future flood risk.
- The effect of land use on downstream flooding is not sufficiently accounted for.
- Natural features that mitigate flood impacts; such as rivers, wetlands and bushland; are not sufficiently recognised nor protected.
- The current land use planning and legislative approvals framework is not effectively ensuring new development achieves an acceptable level of flood risk.
- Reconstruction of building, infrastructure and properties after natural disasters does not sufficiently mitigate or improve resilience to flood risk.
- There is no consistent statewide approach to reducing existing flood risk.

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Recommendations for planning and legislative changes

AND directs that the Commissioner make full and faithful report concerning the aforesaid subject matter of inquiry, and make recommendations which she considers appropriate, feasible and cost effective to improve:

- the preparation and planning for future flood threats and risks, in particular the prevention of the loss of life;
- any legislative changes needed to better protect life and property in natural disaster events.

1. Statutory based catchment modelling of hydrology to avoid and mitigate flooding

- Accurate and consistent flood modelling is the cornerstone of reducing the impacts of future floods – a clear knowledge of where flooding will occur informs not only mitigation and land use decisions but the broad range of flood preparedness and response actions.
- Due to Queensland's significant history of flood destruction and ongoing high levels of flood risk we should establish a world class flood modelling system.
- The modelling should occur at a catchment scale and be undertaken by the State government to provide a clear, substantive and consistent description of flood risk areas in Queensland.
- The flood modelling would be used to provide direction on where development should and shouldn't occur as well as provide guidance on what are the preferred actions to reduce existing flood risks.
- Queensland already has an excellent hydrological modelling system for water resource planning however, it does not address flooding nor does it fully address the effect of land use changes on floods and run-off.
- The water resource planning process should be updated (or a parallel planning process created) to include a specific statutory component on flood modelling and mitigation actions.
- The new flood model would need to address the hydrological effect of: urban and rural land use changes; the effect of vegetation clearing/planting; wetland filling/restoration; the effect of drainage and levee works; the effect on rainfall induced flooding of tidal influence (including storm surge) as well as the increased flood risk associated with climate change due to increased rainfall and storm events, and sea level rises.

2. Review the State Planning Policy 1/03: Mitigating the Adverse Impacts of Flood, Bushfire and Landslide

The SPP came into effect in September 2003 and therefore all development that has occurred subsequently should have achieved acceptable levels of flood risk. The recent floods have shown this not to be the case. Our planning and legislative frameworks must be able to set flood standards which will provide the community with an acceptable level of flood risk and provide surety that these will be met.

A review of the SPP is to occur prior to its 10 year renewal. The review of the flooding facet must occur immediately and be comprehensive. The review needs to firstly address whether the SPP has successfully ensured that development has been planned, designed and constructed to achieve acceptable levels of flood risk. Whilst there will be many technical aspects to investigate, the

fundamental question to be answered is whether planning and development decision appropriately considered flood risk.

Matters to be addressed by the review should include:

- What development since the SPP was introduced has been located in areas with unacceptable flood risk?
- Have local governments mapped flood risk with a sufficient level of data and technical rigor?
- How much variation exists between local governments for flood modelling and mapping?
- Do local government planning schemes adequately incorporate flood risk to constrain development?
- Has the development assessment process sufficiently applied flood risk requirements?
- In what circumstances have flood risk thresholds been reduced and are these justifiable?
- Where specific developments have been shown to not achieve acceptable flood risk there should be detailed investigations into the reasons that caused this – whether this be insufficient planning, mapping, development assessment or some other factor.
- Does the definition of development capture all relevant activities?
- How rebuilding after natural disasters should comply with flood risk development standards.
- How historical approvals should comply with flood risk standards.
- How much flood risk is created by legislative exemptions from the SPP for government, mining and other significant/special projects and whether such loopholes should be closed.

3. State Flood Risk Management Policy and Program

- As discussed above Queensland has a high level of existing flood exposure but there is no Statewide approach to managing this risk.
- Each local government implements their own flood mitigation program with different levels of information, resources, and inclination.
- There should be a Statewide approach to mitigating existing flood risk to ensure:
  - sufficient and consistent for flood risk mapping and standards
  - that there are clear roles and responsibilities
  - flood risk is identified and managed at a catchment scale not on local government boundaries
  - a clear program of mitigation actions is developed to address identified key flood risk areas
  - the investment in mitigation is based on a cost-benefit analysis of all options
  - Councils have the resources to develop and implement comprehensive flood risk management programs
  - State funds are directed based on a risk ranking and the best return on investment.
- As recommended in *State Flood Risk Management Policy* discussion paper, the state policy needs to be implemented through legislation so that standards are met and actions undertaken.